



Levin-Richmond Terminal Corporation

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August 30, 2016

Ms. Karen Jurist
United States Environmental Protection Agency Region 9
75 Hawthorne Street
San Francisco, California 94105
Via email: jurist.karen@epa.gov

RE: 2015-2016 Annual Report, United Heckathorn Superfund Site, Upland Capping System
Richmond, California

Dear Ms. Jurist:

Enclosed please find the 2015-2016 Annual Report for the Upland Capping System at the United Heckathorn Superfund Site.

Please feel free to contact me if you have any questions or concerns with the attached report.

Sincerely,

Gary Levin
Chief Executive Officer
Levin Richmond Terminal Corporation
(510) 307-4091

Enclosure: 2015-2016 Annual Report for United Heckathorn Superfund Site Upland Capping System



2015-2016 Annual Report

**United Heckathorn Superfund Site
Upland Capping System
Richmond, California**

August 30, 2016
Rev. 0

prepared for:

Levin Richmond Terminal Corporation
402 Wright Avenue
Richmond, California 94804

prepared by:

CDIM Engineering, Inc.
45 Polk Street, 3rd Floor
San Francisco, CA 94102

CDIM's work for the Levin Richmond Terminal Corporation was conducted under my supervision. To the best of my knowledge, the data contained herein are true and accurate, are based on what can be reasonably understood as a result of this project, and satisfy the scope of work prescribed by the client for this project. The data, findings, recommendations, specifications, or professional opinions were prepared solely for the use of the Levin Richmond Terminal Corporation in accordance with generally accepted professional engineering and geologic practice. We make no other warranty, either expressed or implied, and are not responsible for the interpretation by others of the contents herein.



Scott Bourne, PE #C72817
Principal Engineer

August 30, 2016

Date

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ACRONYMS AND ABBREVIATIONS

BMP	best management practices
Calscience	Eurofins CalScience Environmental Laboratories
CDIM	CDIM Engineering, Inc.
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethene
DDT	dichlorodiphenyltrichloroethane
gpm	gallons per minute
Heckathorn site or Site	United Heckathorn Superfund Site
IGP	Storm Water Industrial General Permit
LRT	Levin Richmond Terminal
LRTC	Levin Richmond Terminal Corporation
MDL	method detection limit
MLLW	mean lower low water
MRL	method reporting limit
msl	mean sea level
NAL	numeric action level
NPDES	National Pollutant Discharge Elimination System
O&G	oil and grease
O&M	operations and maintenance
O&M Plan	<i>Revised Draft Operations and Maintenance Plan, Upland Capping System, Former United Heckathorn Site</i>
ROD	Record of Decision
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resource Control Board
Third Five-Year Review	<i>Third Five-Year Review Report for United Heckathorn Superfund Site, Richmond, California</i>
TS2	advanced storm water treatment system TS2
TSS	total suspended solids
µg/L	micrograms per liter
USEPA	United States Environmental Protection Agency
Weiss	Weiss Associates

1 INTRODUCTION

On behalf of the Levin Richmond Terminal Corporation (LRTC), CDIM Engineering, Inc. (CDIM) prepared this 2015-2016 Annual Report to describe inspection, monitoring, and maintenance performed on the upland cap at the United Heckathorn Superfund Site (the Heckathorn Site).

1.1 Background

From 1947 through 1966, the Heckathorn Site was used for formulation, processing, packaging, and shipping of pesticides including aldrin, dieldrin, dichlorodiphenyltrichloroethane (DDT), and endrin. These activities resulted in the release of pesticides, predominantly DDT, to the surrounding soils and to the Lauritzen Channel. In 1994, after remedial investigation and feasibility studies were completed, the United States Environmental Protection Agency (USEPA) adopted a Record of Decision (ROD) for remedial action requiring:

- Dredging of all soft bay mud from the Lauritzen Channel and Parr Canal, with offsite disposal of dredged material;
- Placement of clean material after dredging;
- Construction of a cap around the former Heckathorn facility to prevent erosion;
- A deed restriction limiting use of the property at the former Heckathorn facility location to non-residential uses; and,
- Marine monitoring to verify the effectiveness of the remedy (USEPA, 1994b).

In 1996, LRTC entered into a Consent Decree¹ with the USEPA, which outlined LRTC's responsibility to design, construct, and maintain a concrete cap around the former Heckathorn facility to prevent erosion (United States District Court, 1996a). LRTC completed construction of the concrete cap in July 1999 (PES, 1999b.)

Since the cap was constructed, USEPA has completed three five-year reviews and has found the upland remedial action is protective of human health and the environment, due to capping of contaminated soils which has eliminated human exposure pathways and prevented erosion (USEPA, 2011).

1.2 Program Objectives

In order to ensure long-term protection of human health and the environment, the remedial action goal established by the USEPA for upland and embankment soils is the prevention of erosion and transport into the Lauritzen Channel (USEPA, 1994a).

The upland cap was designed to protect against erosion of contaminated soils and subsequent flow into the channel associated with surface water runoff (USEPA, 2011).

¹ Montrose Chemical Corporation of California, Chris-Craft Industrial, Rhone-Poulenc, Inc. and Stauffer Management Company (collectively the "Montrose Group") entered into a separate Consent Decree with USEPA for dredging of young bay mud from the Lauritzen Channel and Parr Canal, with offsite disposal of dredged material and placement of clean fill after dredging (United States District Court, 1996b).

The objective of the cap inspection and storm water monitoring programs is to identify any potential release of pesticide-impacted soil by examining the integrity of the cap system through inspection and storm water monitoring (USEPA, 2011).

1.3 Operation and Maintenance Program

LRTC performs operations and maintenance (O&M) activities in accordance with the *Revised Draft Operations and Maintenance Plan, Upland Capping System, Former United Heckathorn Site* (O&M Plan; PES, 1999a). LRTC performs additional O&M activities recommended by USEPA in the *Third Five-Year Review Report for United Heckathorn Superfund Site, Richmond, California* (Third Five-Year Review; USEPA, 2011) to provide added confidence that the upland area remedy maintains its effectiveness.

1.4 Contents of this Report

This Annual Report describes activities performed by LRTC to inspect, monitoring and maintain the upland cap for the period of July 1, 2015 to June 30, 2016. Included is a summary of each of the following:

- Capping system maintenance activities;
- Shotcrete placement and pipe abandonment;
- Storm water collection system inspection and cleaning;
- Storm water system monitoring;
- Storm water treatment;
- Annual cap inspection;
- Proposed site work for 2016-2017; and,
- A conclusion with CDIM's opinion as to the overall condition and effectiveness of the cap in meeting the program objectives.

2 SITE DESCRIPTION

The Levin Richmond Terminal (LRT) is located at 402 Wright Avenue in Richmond, California and is immediately adjacent to the Lauritzen Channel in the Richmond Harbor (Figure 1). The Heckathorn Site includes the northern five acres of the Main Terminal at LRT, known as the upland cap area (Figure 2).

2.1 Upland Area Description and Current Use

The upland cap area is bounded by a railroad track and Cutting Boulevard to the north; South Fourth Street to the east; the LRT and Santa Fe Channel to the south; and, the Lauritzen Channel to the west. The majority of the upland cap area is relatively flat with surface elevations of approximately 9 feet above mean sea level (msl), with the exception of the portion of the upland cap area north of the Lauritzen Channel, which was raised to approximately 15 feet above msl during cap construction.

The upland cap area is used primarily for storage of dry bulk product and railroad operations. Photographs taken during the site inspection are included in Appendix A.

2.2 Nearby Water Bodies

The storm water system in the upland cap area discharges directly to the Lauritzen Channel (Figure 2). The Lauritzen Channel is connected to the San Francisco Bay via the Santa Fe Channel and Richmond Inner Harbor.

2.3 Upland Area Cap

Construction of the concrete cap at the upland cap area began in July 1998 and was completed in July 1999 (PES, 1999b). Installation of the cap consisted of: (1) site grading to promote surface runoff to collection points; (2) installation of a drainage system to collect surface runoff, including BMPs for storm water pollution prevention; and (3) construction of a reinforced concrete cap in the majority of the 5-acre area and construction of a geotextile fabric and gravel cap in the railroad track area (Figure 2). The concrete cap consists of a minimum 6-inch thick concrete with a double layer of welded wire fabric reinforcement. The gravel cover consists of a geotextile fabric over a prepared subgrade. The geotextile fabric is covered by a 6-inch layer of gravel.

2.4 Storm Water Collection and Advanced Treatment

The facility is paved with asphalt and concrete and is graded to direct surface water runoff via sheet flow or shallow swales to drop inlets (Figure 3). The drop inlets drain to five below-grade interceptors² (SW-3 through SW-7) via underground pipe. The interceptors are equipped with compartments and steel baffles to allow the settling of sediments and separation of oil/grease and floatables and normally-closed gate valves, which can be opened during heavy rains to enable discharge to the Lauritzen Channel.

² The interceptors design was based on a five-minute retention time during a 10-year, 24-hour storm event (PES, 1999).

In 2015, LRTC completed modifications³ to the upland cap area storm water collection system and installation of advanced storm water treatment system TS2 (TS2). Single-speed submersible pumps placed into final chamber of each interceptor were connected to newly installed storm drain pipe along the edge of the LRTC pier. During storm events, the submersibles pump storm water captured by interceptors SW-3 to SW-7 through an inline static mixer where a biopolymer flocculant is added. Storm water then settles in a nominal 20,000-gallon aboveground clarification tank, where the water is held and the flocculant and solids separate from the water. Supernatant then overflows from the clarifier into a second 20,000-gallon aboveground clarification tank from which it is pumped through four, 48-inch diameter sand filters. Effluent from the treatment system then is discharged to the Lauritzen Channel near the interceptor SW-5 outfall. TS2 is equipped with variable speed drive for pump control, a programmable logic controller, and a human machine interface.

The estimated flow for the SW-3 to SW-7 catchments that results from a 0.2 inches per hour design storm intensity⁴ is approximately 500 gallons per minute (gpm). TS2 is designed to treat approximately 650 gpm, or approximately 130% of the required flow. Additionally, due to the storage volume provided by interceptors, clarifiers and equalization tank, the system is able to capture and treat periods of storm water flow in excess of 650 gpm before treatment bypass occurs.

³ The storm water treatment system was described in the 2014-2015 annual report and a telephone conversation (December 26, 2014) and email correspondence (January 26, 2016) between Rachelle Thompson of USEPA and Scott Bourne of Weiss Associates.

⁴ Design criteria for flow-based treatment established in IGP (SWRCB, 2014).

3 OPERATION AND MAINTENANCE

3.1 Upland Cap Maintenance

During the 2015-2016 reporting year, LRTC monitored the performance of concrete cap and gravel cover in accordance with recommendations contained in the 2014-2015 Annual Report (Weiss Associates [Weiss], 2015b). Deteriorating concrete identified in the southern portion of the eastern swale of the Main Terminal was observed to remain intact. LRTC continuously monitored other cracks, seals, and joints for signs of propagation and/or degradation. No evidence of underlying soil was observed. The upland cap functioned as designed and no maintenance or major repair of the cap was conducted during the current reported period.

LRTC began two projects during the reporting period which involved the upland cap: 1) installation of a roadway across three railroad tracks in the northern portion of the upland cap area (Appendix A; Photo 11); and 2) installation of new concrete along the western edge of the cap in an area previously covered by wood timbers (Appendix A; Photos 2, 4 and 6) (Figure 3). These construction activities are being undertaken in order to widen the existing roadway and provide additional drainage control. Both are anticipated to continue through the 2016-2017 reporting year. Neither activity resulted or is expected to result in the disturbance of underlying soil. Work is being performed during dry-weather conditions.

3.2 Shotcrete Placement and Pipe Abandonment

During seasonal low tides from May 9 to 13 and June 6 to 9, 2016, LRTC placed shotcrete along the shoreline and at the base of the sheet pile wall. Work was performed as part of LRTC's regular dock maintenance. New shotcrete was applied in two areas: between bents 21 and 30 and between bents 61 and 69.5.⁵ Shotcrete was also added to reinforce previously placed shotcrete between bents -1 and -12. The shotcrete mixture consisted of cement, aggregate, and fiber reinforcement. Shotcrete was placed between elevation -1.0 feet mean lower low water (MLLW), which is the lowest elevation that could be achieved while remaining above the tideline, and elevation 5 feet MLLW, where the shoreline meets the existing seawall.

In preparation for the shotcrete placement, LRTC capped two abandoned cast iron pipes protruding from the shoreline (Figure 3). One of pipes was believed to be P1-5 (at bent 20.5), which was a 10-inch metal pipe identified by USEPA during previous field investigations (CH2M Hill, 2012). At the same location, LRTC encountered a second 1.5-inch diameter pipe not previously identified by USEPA, which appeared to be a spare electrical conduit. LRTC cut pipe P1-5 and the spare conduit back to the seawall and placed a cap over the ends. LRTC also encountered what appeared to be pipe P4-10 at bent 26.5. Upon inspection, LRTC found P4-10 to be a 4-inch metal tube that was embedded less than two feet into the shoreline. LRTC removed P4-10 from the shoreline. LRTC observed no evidence of flow from the pipes.

3.3 Storm Water Collection System Inspection and Cleaning

LRTC inspected the storm water drain inlets and interceptors prior to the rainy season, and monthly through April. LRTC inspected and cleaned storm water interceptors SW-3 to SW-7 between July 27 and August

⁵ The shoreline between bents 61 and 69.5 is south of the upland cap.

13, 2015. Accumulated material was removed from the interceptors. This material appeared to be primarily bulk product and was returned to the bulk product piles.

LRTC inspects drain inlets monthly per its Storm Water Pollution Prevention Plan (SWPPP; Weiss Associates [Weiss], 2015a). LRTC regularly cleaned inlets and replaced inlet filters per the SWPPP.

3.4 Storm Water Monitoring

The objective of the storm water monitoring program is to verify the cap is effectively preventing release of soils potentially containing residual concentrations of to the Lauritzen Channel. This section describes storm water sampling, results, quality assurance/quality control procedures; and includes an assessment of results.

3.4.1 Storm Water Sampling

During the 2015-2016 reporting year, LRTC sampled industrial storm water discharges in accordance with State Water Resources Control Board (SWRCB) Water Quality Order No. 2014-0057-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 (General Permit for Storm Water Discharges Associated with Industrial Activities) (the IGP) (SWRCB, 2014); the O&M Plan (PES, 1999a); and, a Consent Decree between San Francisco Baykeeper and the Levin Richmond Terminal Corporation (United States District Court, 2014). Storm water monitoring requirements are documented in LRTC's SWPPP.

Prior to 2015, LRTC collected samples from interceptors' SW-3 through SW-7. Since installing advanced treatment system TS2, LRTC no longer regularly discharges storm water at these locations. As a result, LRTC now collects storm water samples from the TS2 influent and effluent.⁶ In the event that elevated pesticides are detected in the TS2 influent or effluent, LRTC is prepared to resume sample at interceptors SW-3 through SW-7.

Storm water samples were submitted to Eurofins CalScience Environmental Laboratories (CalScience) in Concord, California for pesticide analysis by USEPA Method 8081A. Each sample was run using both standard 8081A analysis and low-level 8081A analysis to achieve lowest possible method detection limits (MDLs). Storm water samples were also submitted to TestAmerica Laboratories in Pleasanton, California for the following analyses: pH by Standard Method 4500, total suspended solids (TSS) by Standard Method 2540D, oil and grease (O&G) by USEPA 1644A, and metals by USEPA Method 200.8. Original laboratory reports, including applicable chain-of-custody forms, are included in Appendix B.⁷

3.4.2 Sample Results

During the 2015-2016 reporting year, storm water from the combined TS2 influent and effluent was sampled during four storm events: November 2, 2015; December 3, 2015; January 13, 2016; and, January 22,

⁶ Changes to storm water monitoring were discussed during a telephone conversation on November 3, 2015 between Rachelle Thompson of USEPA and Scott Bourne of Weiss Associates.

⁷ Laboratory analytical reports include data for other storm water discharge points at LRT (TS1-E, TS3-E, SW-11).

2016. The November 2, 2015 sampling event occurred during the first storm event (0.5 inches of rainfall)⁸ producing discharge for the 2015-2016 rainy season; its results represent the year's first flush.

Tables 1 and 2 show laboratory analytical results for pesticides and general parameters/metals, respectively. Pesticides were not detected in the treated storm water discharge from TS2 during any of the four sampling events during the 2015-2016 reporting year. TS2 discharge results for all other pollutants (metals, O&G pH and TSS) were below the IGP numeric action levels (NALs).

Samples of the combined influent to TS2 were also collected during each of the four events for use in evaluation of treatment system effectiveness. During the December 3, 2015 sampling event, 4,4-DDE and 4,4-DDT were detected in the combined, untreated TS2 influent at concentrations of 0.0075 micrograms per liter (µg/L) and 0.022 µg/L, respectively. No other pesticides were detected in the influent storm water samples collected during the reporting year.

3.4.3 Quality Assurance/Quality Control

The O&M Plan requires at least one duplicate sample be collected per storm sampling event. During the 2015-2016 reporting year, duplicate samples were submitted from the December 3, 2015 and January 13 and 22, 2016 sampling events. During the November 2, 2015 sampling event a duplicate sample was submitted for a discharge location not associated with the upland cap area at LRT. Laboratory MDLs for 2,4'-DDD, 4,4'-DDD, 2,4-DDE, 4,4-DDE, and, 4,4'-DDT were each below the total DDT final surface water remediation level established in the ROD (USEPA, 1994b) (0.00059 µg/L) for all events. The laboratory method reporting limits (MRLs) for all DDT isomers and MDL for 2,4'-DDT exceeded the final surface water remediation levels for all events. The analytical laboratory reports that lower MDLs/MRLs are not achievable using USEPA Method 8081A. No other data quality issues were reported through the data validation process. Based on the data validation process, the data resulting from this investigation are acceptable and complete.

3.4.4 Assessment of Results

The pesticides detected in storm water samples collected at influent of TS2 during the 2015-2016 storm water season were consistent with historical concentrations. Concentration trend charts for DDT and dieldrin for storm water discharge locations from 2011 to 2015 are contained in the 2014-2015 Annual Report (Weiss, 2015b). Because LRTC has replaced discharge from individual interceptors with treatment at TS2 and combined discharge, trend charts will only be presented for DDT⁹ at TS2 (Figure 4). The chart provides both detected concentrations and non-detect results.¹⁰

Pesticide concentrations in effluent storm water samples collected during the 2015-2016 storm water season were below MDLs for the four sampling events performed. Sample results show that TS2 is effective at reducing concentrations of TSS and pesticides.

⁸ Rainfall from LRTC rain gauge.

⁹ Note that plotted DDT values are for the sum of the 4,4'- and 2,4'- isomers of DDT, DDD, and DDE.

¹⁰ Denoted by "<n", where n is the sum of the DDT, DDD, and DDE detection limits, if available, or reporting limit otherwise.

3.5 Storm Water Treatment System Operation

LRTC completed TS2 installation on October 1, 2015. LRT received approximately 23 inches of rainfall¹¹ during the 2015-2016 reporting period. LRTC reports that TS2 provided sufficient treatment capacity to prevent treatment system bypass for all periods where its operation was observed. No significant operation and maintenance concerns were encountered. Sample results show that TS2 is effective at reducing effluent pesticide concentrations to levels below laboratory MDLs.

¹¹ Rainfall from LRTC rain gauge.

4 ANNUAL SITE INSPECTION

Representatives of LRTC and CDIM inspected the upland cap on May 31, 2016. The inspection included visual observations of the concrete cap, gravel cover, and drainage system throughout the observable extent of the upland cap area. Appendix A includes photographs taken during the inspection. Figure 3 shows the locations of photographs. Appendix C includes the inspection form.

4.1 Concrete Cap Inspection

Visual inspections concentrated on identifying signs of deterioration and exposure of the underlying subgrade at cracks, joints, high-loading areas, gravel and cap penetrations. Areas identified in the Third Five-Year Review (USEPA, 2011) and the 2014-2015 Annual Report (Weiss, 2015b) with cracks and potential settlement were reexamined.

- **SW-3 Area** – Minor surficial cracks were observed within and to the west of the bulk product storage area, with heavier cracks and seams located to the northwest of interceptor SW-3 (Appendix A; Photos 1, 3, and 5). New concrete was observed along the western edge of the SW-3 area (Appendix A; Photos 2 and 4).
- **SW-4 Area** – Areas of minor surficial cracks were observed throughout the SW-4 area. Cracks and sealant were noted extending from the southeast corner of interceptor SW-4 toward the east and surrounding drain inlet 4DI-19 (Appendix A; Photos 7 and 8). New concrete work along the western edge of SW-4 was also observed (Appendix A; Photos 6 and 9).
- **SW-5 Area** – Minor cracks were noted in the vicinity of interceptor SW-5 and treatment system TS2. Construction of the new road was observed to be in progress (Appendix A; Photo 11).
- **SW-6 Area** – Minor cracks were noted north and northeast of interceptor SW-6, and south of the rail tracks (Appendix A; Photos 14, 15, and 17). Small areas of concrete deterioration were observed in the southern portion of the eastern swale of the Main Terminal (Appendix A; Photos 18 and 19).
- **SW-7 Area** – Minor surficial cracks were observed in this area.

No evidence of differential settling or vertical displacement was observed. No evidence of cracks, gaps, significant cap deterioration, or other material breach with apparent potential for exposure of the underlying subgrade was observed during the inspection. CDIM recommends that LRTC continue to monitor cracks and deterioration noted during the inspection. No repairs are recommended at this time.

4.2 Gravel Cover Inspection

Visual observations of the gravel cover concentrated on identifying areas around the rail and shoreline where gravel cover was thin. A geotextile membrane underlies the gravel cover, but was not visually observed in any of the areas inspected. Below is a summary of observations from the concrete cap inspection.

- **SW-4 Area** – Some gravel cover has been replaced with concrete along the western edge of the area (Appendix A; Photo 4).
- **SW-5 Area** – The gravel cover appeared thin in some areas; the underlying geotextile fabric was not exposed (Appendix A; Photos 10 and 13).

- **SW-6 Area** – The gravel cover appeared thin in between the rail tracks; the underlying geotextile fabric was not exposed (Appendix A; Photo 12).

No visual evidence of differential settling or vertical displacement was observed. Overall, the gravel cover was found to be in good condition and functioning properly with no apparent potential for exposure of the underlying subgrade observed. CDIM recommends that LRTC continue to regularly inspect the gravel cover and perform maintenance as detailed in Section 6.

4.3 Shoreline Reconnaissance and Wet Weather Sampling

LRTC met with USEPA and Montrose Chemical Corporate of California (Montrose) on November 11 and December 9 to discuss a proposed wet-weather sampling plan from Montrose and its consultants (Anchor QEA) for pipes identified by USEPA beneath the dock (CH2M Hill, 2012). LRTC performed shoreline reconnaissance on November 11, 2015 and with Anchor QEA on November 19, 2015. The objective of these reconnaissance inspections was to locate pipes, outfalls and seeps identified by USEPA (CH2M Hill, 2015), established whether dry-weather flow exists, and to plan for wet weather sampling. From this reconnaissance, LRTC identified 15 pipes and conduits along the LRTC shoreline with no known purpose. No dry weather flow was observed from the pipes during either site reconnaissance.

During the December 9, 2016 meeting, LRTC agreed to provide Anchor QEA access for wet-weather sampling of the identified pipes outfalls and seeps for pesticide analysis. On December 15, 2015, Montrose unilaterally stopped negotiation of an access agreement.

5 PROPOSED SITE WORK FOR 2016-2017

During the 2016-2017 reporting year, O&M activities will continue as follows:

- Storm water discharge samples will be collected from the TS2 treatment system effluent (combined SW-3 through SW-7) discharge location. TS2 influent samples will also be collected to evaluate system effectiveness.
- A survey of the upland cap will be completed in the late spring of 2017 to monitor for differential settlement that could impact cap integrity. It will be compared against the baseline survey completed in May 2014 and included in the 2013-2014 Annual Report (Weiss, 2014).
- An annual inspection of the concrete cap and gravel cover in the upland cap area will be performed in the early summer of 2017.
- Regular inspections of the upland capping system, including the drainage system, will continue as part of the SWPPP (Weiss, 2015a) compliance activities and daily operations.

Any repairs to the cap, if required, will be documented and reported in a memorandum to the USEPA and the California Department of Toxic Substances Control. Proposed site work under the O&M Plan for 2016-2017 is presented in Table 3.

LRTC is in the process of installing a roadway in the upland cap area across three railroad tracks, and concrete berm along the western edge of the cap (Section 3.1; Figure 3). This work is planned to be completed during the 2016-2017 reporting year.

6 CONCLUSIONS AND RECOMMENDATIONS

The annual upland capping system inspection found that the surface cap is in overall good condition and effectively functions to prevent erosion of the underlying soil. Storm water sampling results from the upland cap area indicate that treatment system TS2 is effective in reducing the discharge of pesticides via the storm water collection system.

The following maintenance and monitoring activities are recommended:

- Monitor gravel cover areas of SW-5 and SW-6;
- Monitor deteriorated concrete in the southern portion of the eastern swale of the Main Terminal at SW-6, and replace affected sections of concrete should further deterioration occur or evidence of underlying soil be observed;
- Implement BMPs identified in the LRT SWPPP (Weiss, 2015a); and,
- Monitor storm water discharges for the presence of pesticides.

7 REFERENCES

- CH2MHill, 2012. Summary of Field Activities to Support Phase 4 Source Identification Study United Heckathorn Superfund Site, Richmond, California. January 3.
- PES Environmental, Inc., 1999a. Revised Draft Operations and Maintenance Plan, Upland Capping System, Former United Heckathorn Site, March.
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- State Water Resources Control Board, 2014. General Permit for Storm Water Discharges Associated with Industrial Activities, Order No. 2014-0057-DWQ, National Pollutant Discharge Elimination System General Permit No. CAS000001, April.
- United States District Court, Northern District of California, 1996a. Consent Decree, Levin Group RD/RA, United States of America Plaintiff v. Montrose Chemical Corporation of California, et al., June.
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- United States Environmental Protection Agency (USEPA), 1994a. Feasibility Study for the United Heckathorn Superfund Site, Richmond, California. July.
- _____, 1994b. EPA Superfund Record of Decision: United Heckathorn Co., EPA ID: CAD981436363; OU 01, Richmond, CA, EPA/ROD/R09-96/5021996, October.
- _____, 2011. Third Five-Year Review Report for United Heckathorn Superfund Site, Richmond, California, September.
- Weiss Associates, 2014. 2013-2014 Annual Report for the United Heckathorn Superfund Site, Upland Capping System, Richmond, California, July.
- _____, 2015a. Storm Water Pollution Prevention Plan and Monitoring and Reporting Plan for Levin Richmond Terminal, 402 Wright Avenue, Richmond, California. June.
- _____, 2015b. 2014-2015 Annual Report for the United Heckathorn Superfund Site, Upland Capping System, Richmond, California, July.

TABLES



Table 1. 2015-2016 Storm Water Sampling Data for Pesticides, Levin Richmond Terminal Corporation

Discharge Location	Notes	2,4'-DDD µg/L	4,4'-DDD µg/L	2,4'-DDE µg/L	4,4'-DDE µg/L	4,4'-DDMU µg/L	2,4'-DDT µg/L	4,4'-DDT µg/L	Total DDT µg/L	Aldrin µg/L	alpha-BHC µg/L	alpha-Chlordane µg/L	beta-BHC µg/L	Chlordane µg/L	cis-Nonachlor µg/L	delta-BHC µg/L	Dieldrin µg/L	Endosulfan I µg/L	Endosulfan II µg/L	Endosulfan sulfate µg/L	Endrin µg/L	Endrin aldehyde µg/L	Endrin ketone µg/L	gamma-BHC (Lindane) µg/L	gamma-Chlordane µg/L	Heptachlor µg/L	Heptachlor epoxide µg/L	Methoxychlor µg/L	Oxychlordane µg/L	Toxaphene µg/L	trans-Nonachlor µg/L
INFLUENT																															
TS2-I ^a																															
11/2/2015		<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001	<0.0005		<0.0005	<0.028	<0.0017	<0.030	<0.33	---	<0.029	<0.0005	<0.028	<0.027	<0.029	<0.0005	<0.026	---	<0.0005	<0.0017	<0.0005	<0.0005	<0.025	---	<0.025	---
12/3/2015		<0.0005	<0.0005	<0.0005	0.0075	<0.001	<0.001	0.022		<0.0005	<0.028	<0.0017	<0.030	<0.33	---	<0.029	<0.0005	<0.028	<0.027	<0.029	<0.0005	<0.026	---	<0.0005	<0.0017	<0.0005	<0.0005	<0.025	---	<0.025	---
1/13/2016		<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001	<0.0005		<0.0005	<0.028	<0.0017	<0.030	<0.33	---	<0.029	<0.0005	<0.028	<0.027	<0.029	<0.0005	<0.026	---	<0.0005	<0.0017	<0.0005	<0.0005	<0.025	---	<0.025	---
1/22/2016		<0.0005	<0.0005	<0.0005	<0.0005	---	<0.00099	<0.0005		<0.0005	<0.027	<0.0017	<0.029	<0.32	---	<0.028	<0.0005	<0.027	<0.026	<0.028	<0.0005	<0.026	---	<0.0005	<0.0017	<0.0005	<0.0005	<0.024	---	<0.025	---
EFFLUENT																															
TS2-E ^b																															
11/2/2015		<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001	<0.0005		<0.0005	<0.027	<0.0017	<0.029	<0.32	---	<0.027	<0.0005	<0.027	<0.028	<0.096	<0.0005	<0.025	---	<0.0005	<0.0017	<0.0005	<0.0005	<0.024	---	<0.025	---
12/3/2015		<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005		<0.0005	<0.028	<0.0017	<0.030	<0.33	<0.0017	<0.029	<0.0005	<0.028	<0.027	<0.029	<0.0005	<0.026	<0.024	<0.0005	<0.0017	<0.0005	<0.0005	<0.025	<0.0017	<0.025	<0.0017
12/3/2015	Duplicate	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005		<0.0005	<0.028	<0.0017	<0.030	<0.33	<0.0017	<0.029	<0.0005	<0.028	<0.027	<0.029	<0.0005	<0.026	<0.024	<0.0005	<0.0017	<0.0005	<0.0005	<0.025	<0.0017	<0.025	<0.0017
1/13/2016		<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001	<0.0005		<0.0005	<0.028	<0.0017	<0.030	<0.33	---	<0.029	<0.0005	<0.028	<0.027	<0.029	<0.0005	<0.026	---	<0.0005	<0.0017	<0.0005	<0.0005	<0.025	---	<0.025	---
1/13/2016	Duplicate	<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001	<0.0005		<0.0005	<0.028	<0.0017	<0.030	<0.33	---	<0.029	<0.0005	<0.028	<0.027	<0.029	<0.0005	<0.026	---	<0.0005	<0.0017	<0.0005	<0.0005	<0.025	---	<0.025	---
1/22/2016		<0.0005	<0.0005	<0.0005	<0.0005	---	<0.001	<0.0005		<0.0005	<0.028	<0.0017	<0.030	<0.33	---	<0.029	<0.0005	<0.028	<0.027	<0.029	<0.0005	<0.026	---	<0.0005	<0.0017	<0.0005	<0.0005	<0.025	---	<0.025	---
1/22/2016	Duplicate	<0.00049	<0.0005	<0.00049	<0.0005	---	<0.00099	<0.0005		<0.0005	<0.028	<0.0017	<0.031	<0.34	---	<0.030	<0.0005	<0.029	<0.028	<0.030	<0.0005	<0.028	---	<0.0005	<0.0017	<0.0005	<0.0005	<0.026	---	<0.025	---
Remediation Goal ^c		0.00059										0.00014																			

Notes:

Detected concentrations of pesticides are displayed in **bold**.

^a TS2-I is the combined influent from interceptors SW-3 to SW-7 and does not represent discharge. It is used to evaluate TS-2 effectiveness.

^b TS2-E is the effluent of treatment system TS-2, which treats storm water from interceptors SW-3 to SW-7.

^c Based on USEPA Superfund Record of Decision: United Heckathorn Co., October 1994, for surface waters in the Lauritzen, Santa Fe, and lower Richmond Inner Harbor Channels.

Acronyms/Abbreviations:

J = concentration reported is an estimated value

< n =not detected above the detection limit

--- = not analyzed

µg/L = micrograms per liter

USEPA = United States Environmental Protection Agency

Table 2. 2015-2016 Storm Water Sampling Data for General Parameters and Metals, Levin Richmond Terminal Corporation

Discharge Location	Notes	pH	Total Oil and Grease mg/L	Total Suspended Solids mg/L	Aluminum µg/L	Copper µg/L	Iron µg/L	Lead µg/L	Nickel µg/L	Zinc µg/L				
INFLUENT														
TS2-I ^a														
11/2/2015		---	---	240	1,900	26	3,100	76	B	11	570			
12/3/2015		7.62	<5.2	170	1,000	25	2,800	B	150	B	0.84	380		
1/13/2016		7.82	3.3	98	370	11	1,300	22		3.2		120		
1/22/2016		7.71	<3.9	23	210	9.9	B	900	6.5	1.7	J	78		
EFFLUENT														
TS2-E ^b														
11/2/2015		8.00	<5.8	4.8	<100	7.1	92	1.2	B	4.3		91		
11/2/2015	Duplicate	8.01	<5.8	4.8	<100	6.4	77	1.1	B	4.2		92		
12/3/2015		7.78	<5.4	1.1	<100	4.7	38	J,B	1.4		2.1	J	120	
12/3/2015	Duplicate	7.79	<5.3	<1.0	<100	4.6	39	J,B	1.4		2.1	J	120	
1/13/2016		7.66	1.5	J,B	<1.0	<100	13	26	J	6.2	0.75	J	45	
1/13/2016	Duplicate	7.71	2.1	J,B	<1.0	<100	79	69	J	28	J	1.2	J	110
1/22/2016		7.77	<4.0	<1.0	<100	3.7	B	34	J	0.5	0.89	J	57	
1/22/2016	Duplicate	7.77	<3.9	<1.0	<100	9.3	B	68	0.99		0.99	J	61	

Notes:

^a TS2-I is the combined influent from interceptors SW-3 to SW-7 and does not represent discharge. It is used to evaluate TS-2 effectiveness.

^b TS2-E is the effluent of treatment system TS-2, which treats storm water from interceptors SW-3 to SW-7.

Acronyms/Abbreviations:

--- = not analyzed

< n = not detected above the reporting limit

B = compounds was found in blank and sample

J = concentration reported is an estimated value

mg/L = milligrams per liter

Table 3. Proposed Site Work for 2016-2017, Levin Richmond Terminal Corporation

Aspect	Description	Anticipated Completion Date
General	Implement activities (i.e., cap maintenance, storm water monitoring, interceptor cleanout) described in the O&M Plan. ¹	Continuously
	Submit report of O&M performed for the period of July 1, 2016 to June 30, 2017.	On/around August 15, 2017
Concrete Cap	Perform 2016-2017 annual inspection of the cap under oversight of a registered engineer.	June 1, 2017
	Perform the second triennial survey of the upland cap area to monitor for differential settlement.	June 1, 2017
	Monitor deteriorated concrete in the southern portion of the eastern swale of the Main Terminal identified in Photos 18 and 19 (Appendix A); replace affected sections should evidence of underlying soil be observed.	Continuously
	Monitor identified cracks, seals, and joints for signs of propagation and/or degradation throughout upland capping system.	Continuously
Gravel Cover	Monitor the gravel cover throughout the Upland Area for signs of thinning or ground exposure.	Continuously
Storm Water System	Continue to treat combined storm water pumped from interceptors SW-3, SW-4, SW-5, SW-6, and SW-7 at treatment system TS-2 using flocculation, settling, and filtration methods.	Continuously

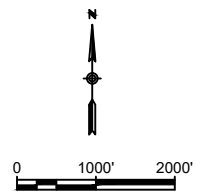
¹ Revised Draft Operations and Maintenance Plan, Upland Capping System, Former United Heckathorn Site, PES Environmental, Inc., March 1999.

FIGURES



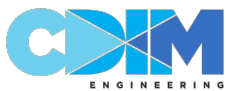
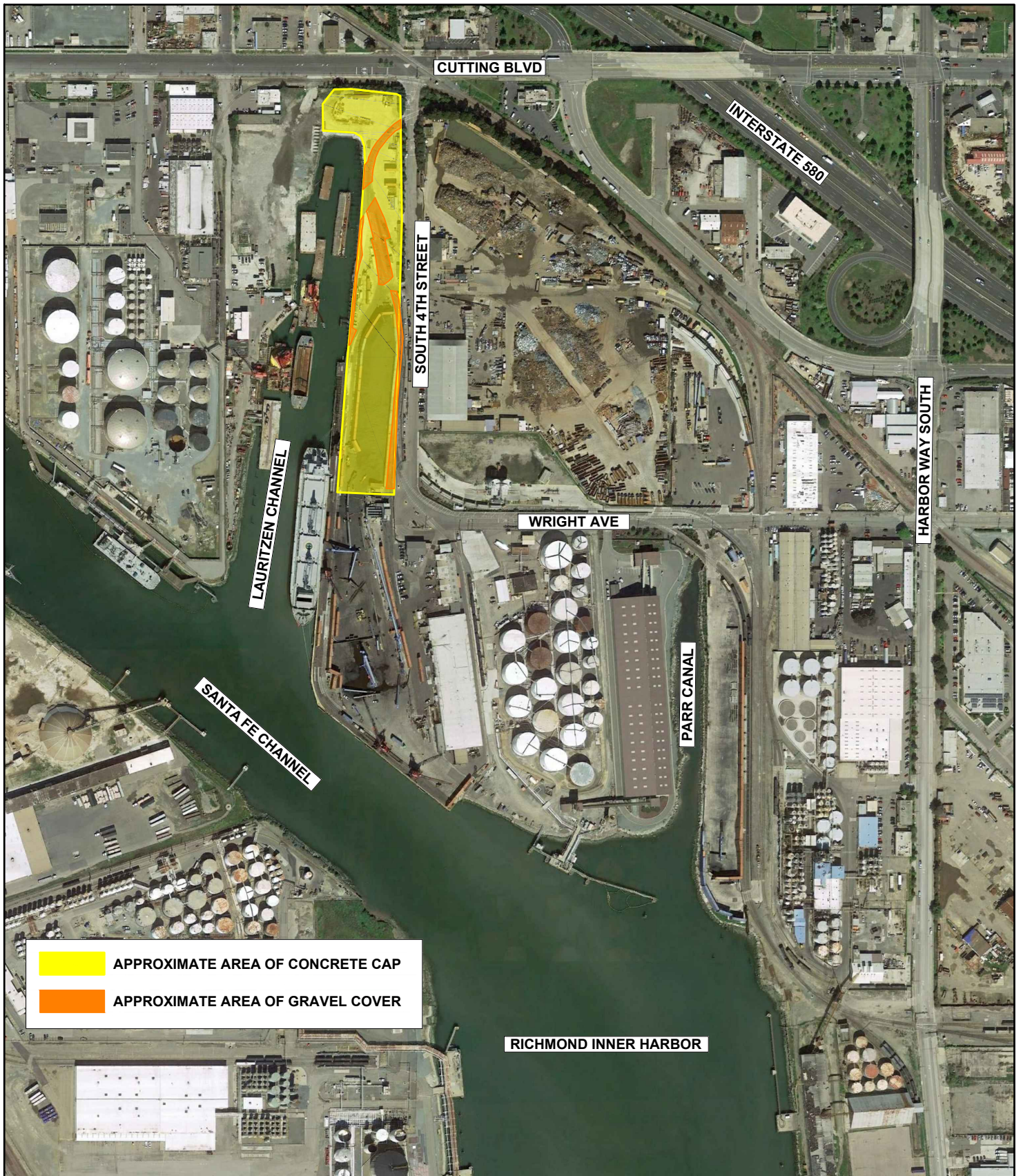
SITE LOCATION MAP

UNITED HECKATHORN SUPERFUND SITE
UPLAND CAPPING SYSTEM
RICHMOND, CALIFORNIA

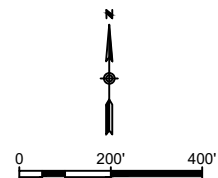


FIGURE

1



SITE LOCATION MAP
UNITED HECKATHORN SUPERFUND SITE
UPLAND CAPPING SYSTEM
RICHMOND, CALIFORNIA



FIGURE

2

APPENDIX A

Upland Capping System Inspection Photos

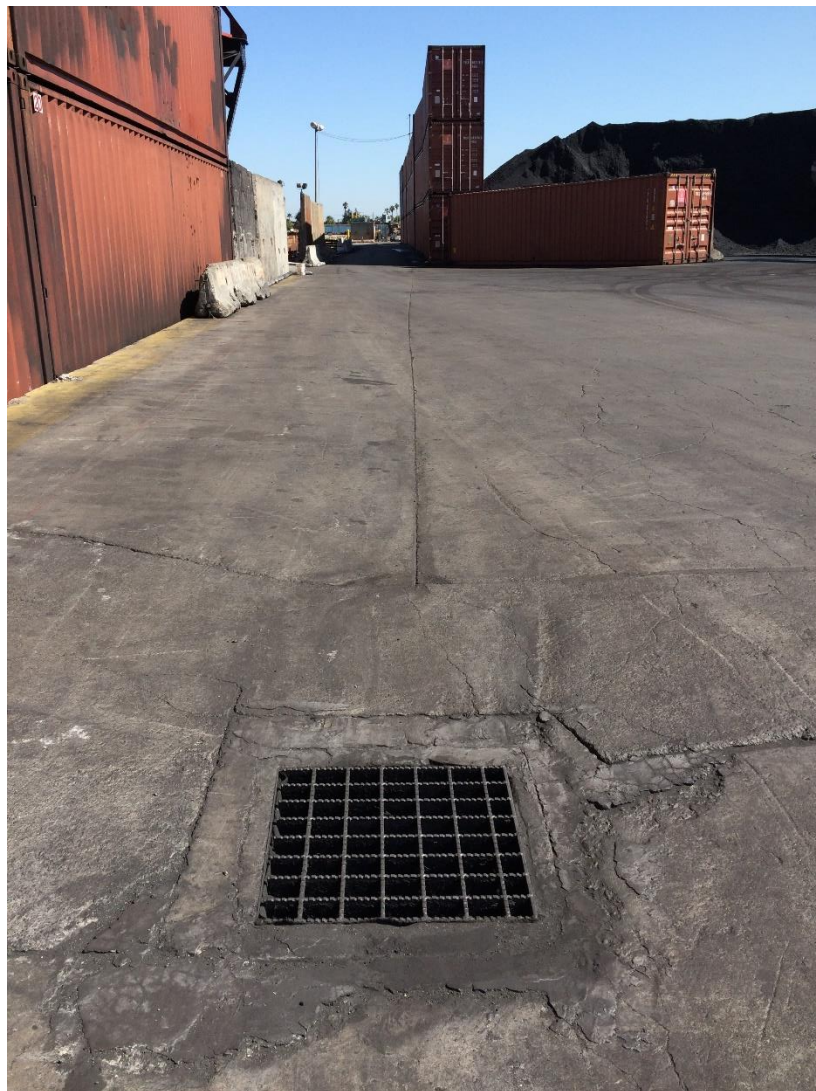


Photo 1 – Looking north from drain inlet 3DI-10, along western alley of secondary storage area: surficial cracking and concrete seams in SW-3 area, with sealed crack in foreground.

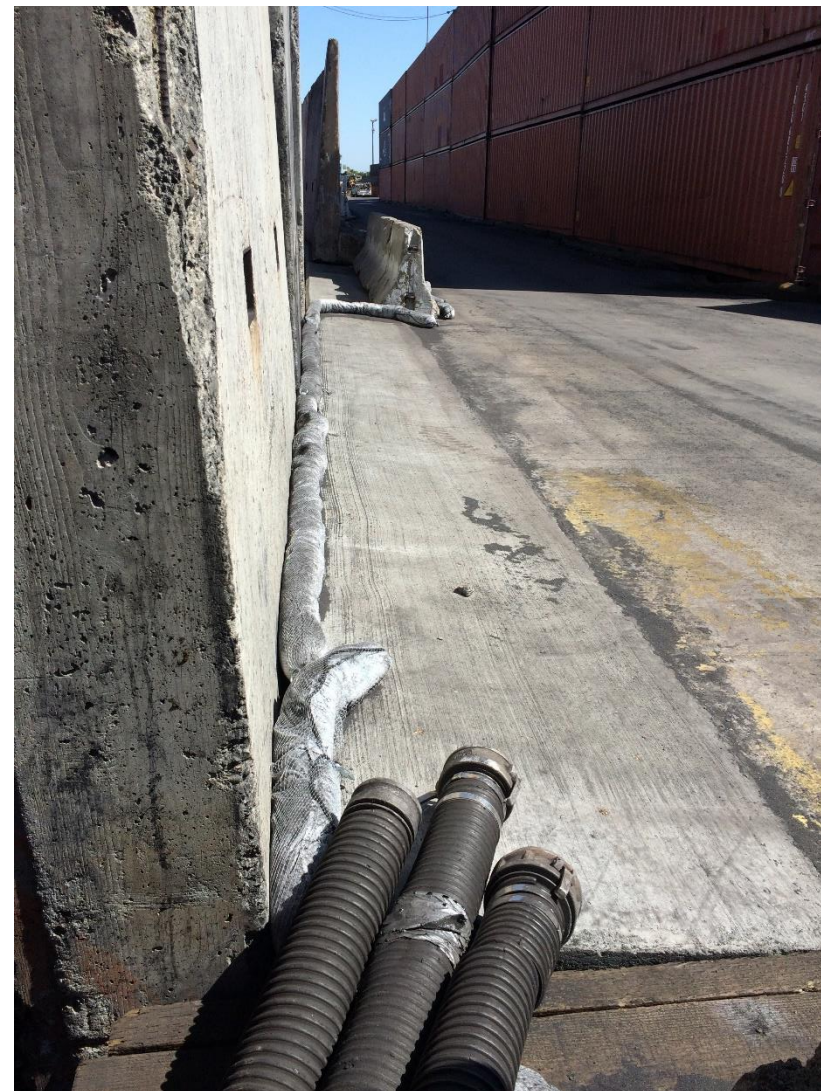


Photo 2 – Looking north along western alley of secondary storage area: new concrete extending road in an area that was formerly gravel and timbers.

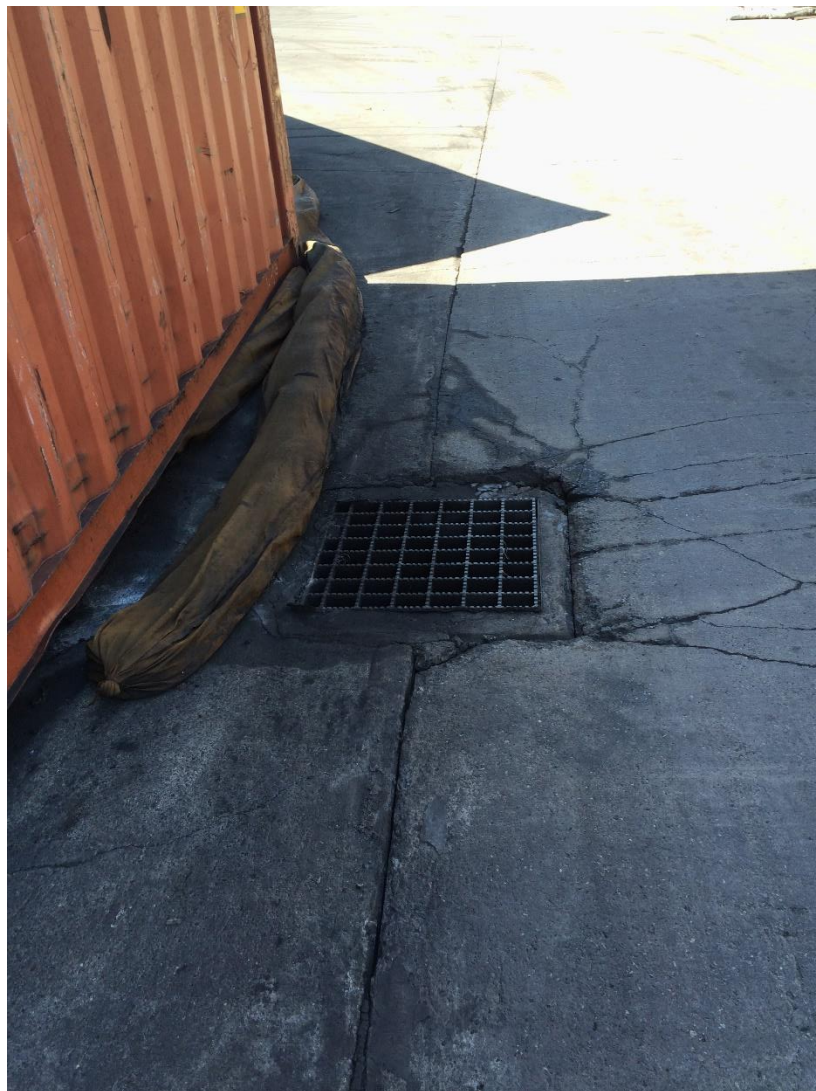


Photo 3 – Looking south toward drain inlet 3DI-11 along western alley of secondary storage area: surficial cracking and concrete seam in SW-3 area.



Photo 4 – Looking south along western edge of secondary storage area: new concrete near drain inlet 3DI-11.

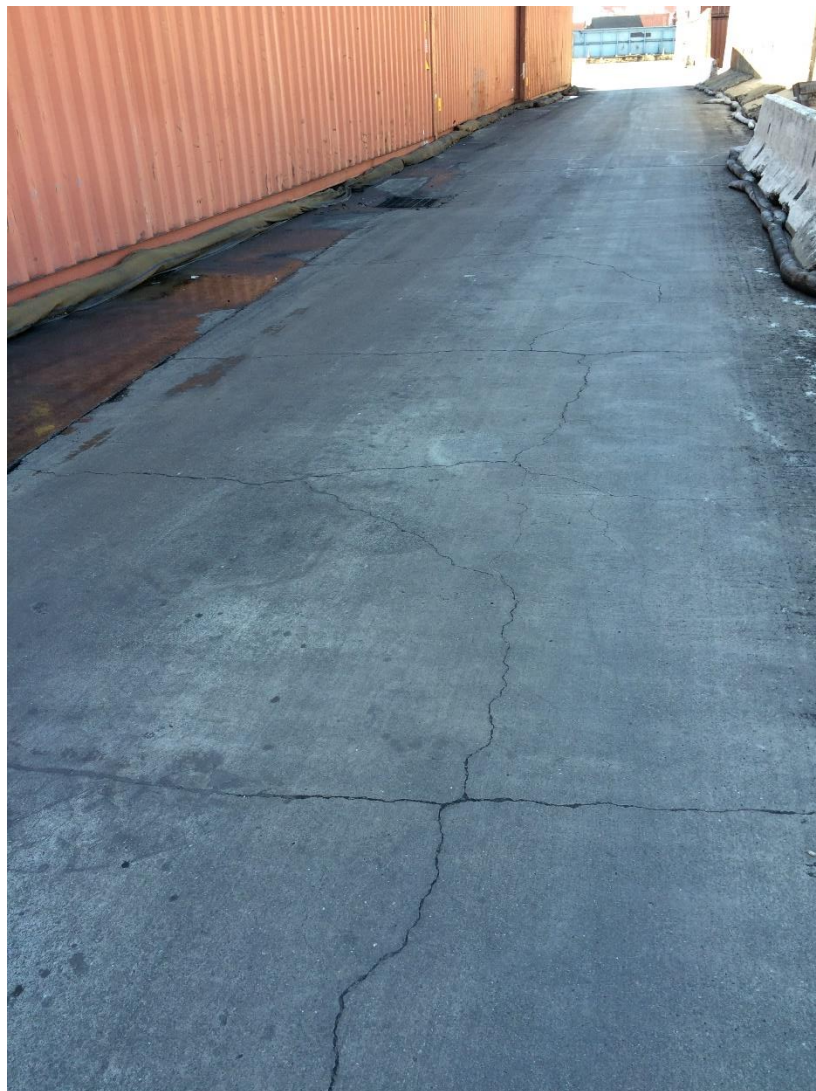


Photo 5 - Looking south toward drain inlet 3DI-11A: areas of surficial cracking.



Photo 6 – Looking north, along western alley of secondary storage area: new concrete added.

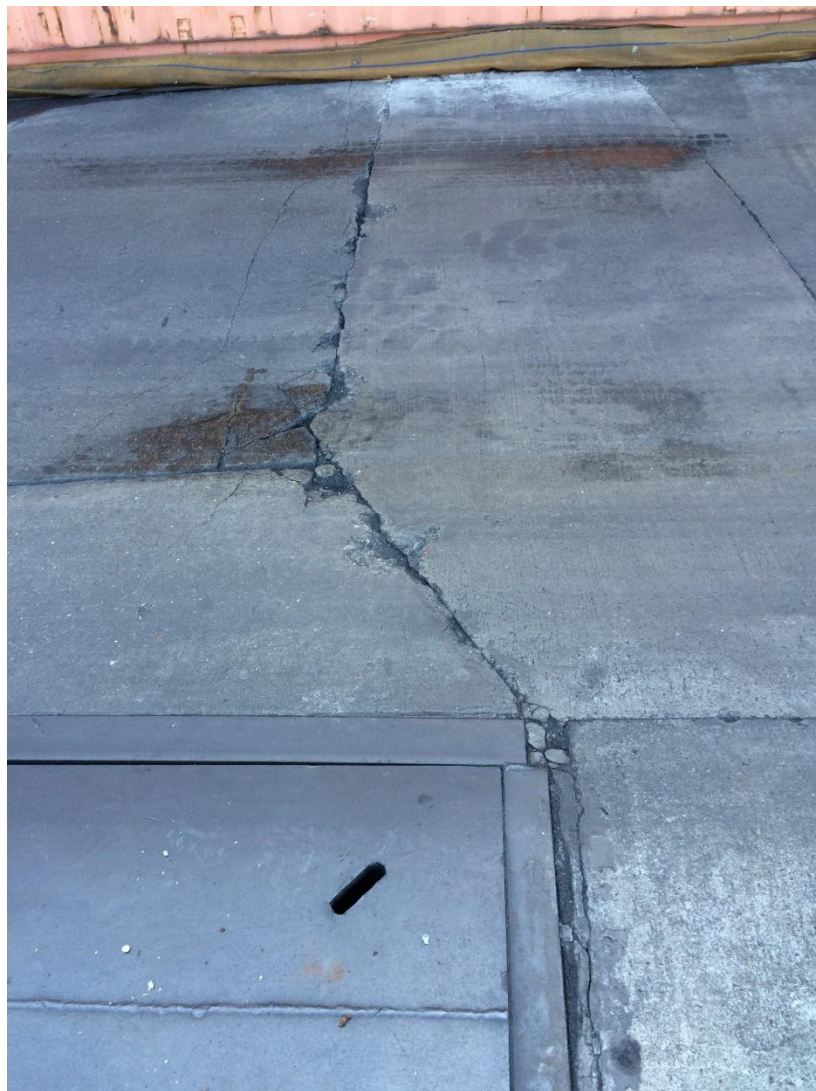


Photo 7 – Looking east from corner of interceptor SW-4: crack extending east with sealant and concrete wearing at seams.



Photo 8 – Looking northeast toward 4DI-19: surficial cracks with sealant added.



Photo 9 - Looking south: new concrete work in progress.



Photo 10 - Looking north: gravel cover to the west of treatment system TS-2 and interceptor SW-5.



Photo 11 – Looking north: new road area replacing some former gravel area.



Photo 12 – Looking south: gravel cover.



Photo 13 – Looking north: gravel cover between rail tracks.



Photo 14 – Looking west toward Municipal outfall: seams and surficial cracks. No change from last year.



Photo 15 – Northwest corner of site: minor surface cracks.



Photo 16 – Gravel cover adjacent to gate at northeastern corner of yard.



Photo 17 – Area southeast of interceptor SW-6: minor surface cracks. No change from last year.

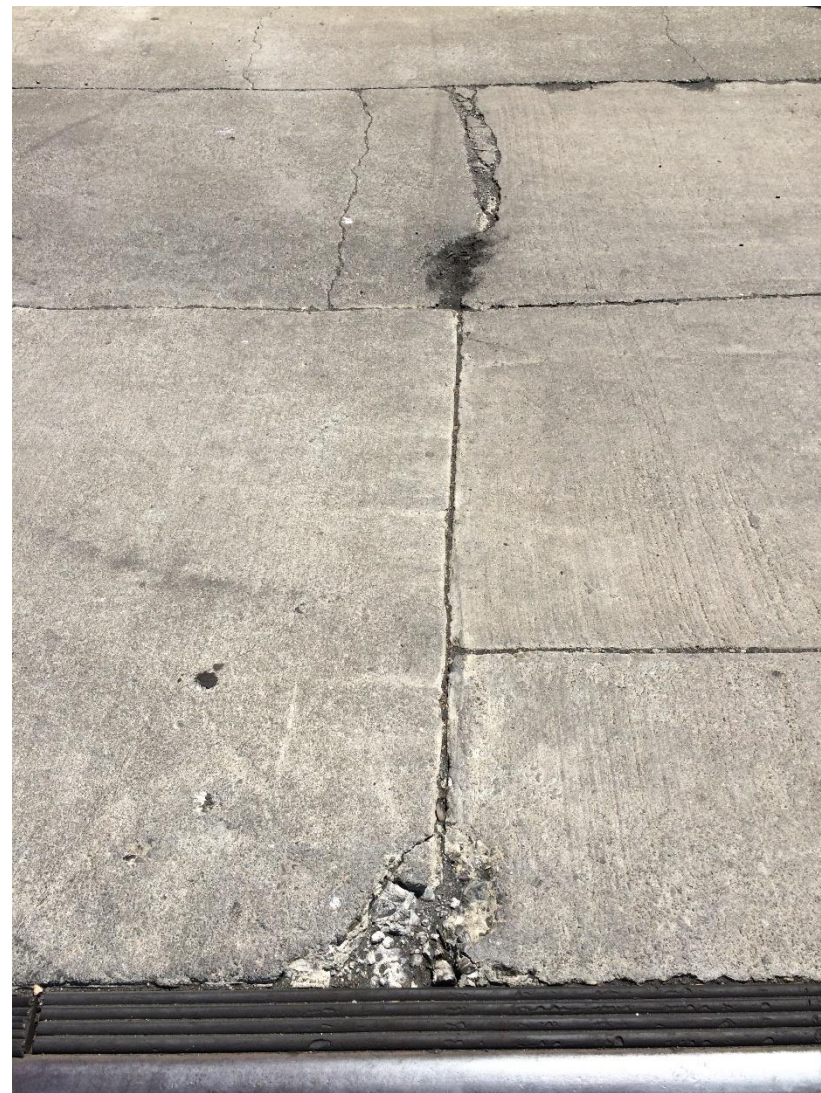


Photo 18 – Looking east, north of 5DI-14A: areas of minor concrete deterioration. No change from last year.



Photo 19 – Looking east, north of 5DI-14A: areas of minor concrete deterioration. No change from last year.

APPENDIX B

Laboratory Analytical Reports



WORK ORDER NUMBER: 15-11-0230

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Weiss Associates

Client Project Name: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Attention: Scott Bourne
2200 Powell Street
Suite 925
Emeryville, CA 94608-1879

A handwritten signature in black ink, reading "Virendra R. Patel", enclosed in a hand-drawn oval.

Approved for release on 11/11/2015 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



Calscience

Contents

Client Project Name: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3
 Work Order Number: 15-11-0230

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Work Order Narrative

Work Order: 15-11-0230Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 11/04/15. They were assigned to Work Order 15-11-0230.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



Calscience

Sample Summary

Client: Weiss Associates	Work Order: 15-11-0230
2200 Powell Street, Suite 925	Project Name: LRT 2014-2015 Annual Storm Water Sampling /
Emeryville, CA 94608-1879	426-2026.01 Task 1.1.3
	PO Number:
	Date/Time Received: 11/04/15 10:25
	Number of Containers: 2

Attn: Scott Bourne

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TS2-I-2015-1	15-11-0230-1	11/02/15 09:30	2	Aqueous


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Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 11/04/15
Work Order: 15-11-0230
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-I-2015-1	15-11-0230-1-A	11/02/15 09:30	Aqueous	GC 44	11/05/15	11/06/15 13:15	151105L14

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	83	50-135	
2,4,5,6-Tetrachloro-m-Xylene	85	50-135	

Method Blank	099-12-529-854	N/A	Aqueous	GC 44	11/05/15	11/06/15 12:04	151105L14
--------------	----------------	-----	---------	-------	----------	----------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	81	50-135	
2,4,5,6-Tetrachloro-m-Xylene	82	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 11/04/15
Work Order: 15-11-0230
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-I-2015-1	15-11-0230-1-AB	11/02/15 09:30	Aqueous	GC 44	11/09/15	11/10/15 13:12	151109L01

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	76	50-150	
2,4,5,6-Tetrachloro-m-Xylene	109	50-150	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 11/04/15
Work Order: 15-11-0230
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-704-3	N/A	Aqueous	GC 44	11/09/15	11/10/15 12:57	151109L01

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	59	50-150	
2,4,5,6-Tetrachloro-m-Xylene	78	50-150	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 11/04/15
Work Order: 15-11-0230
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-529-854	LCS	Aqueous	GC 44	11/05/15	11/06/15 12:18	151105L14
099-12-529-854	LCSD	Aqueous	GC 44	11/05/15	11/06/15 12:32	151105L14

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.3722	74	0.4025	81	50-135	36-149	8	0-25	
Gamma-BHC	0.5000	0.3891	78	0.4174	83	50-135	36-149	7	0-25	
Beta-BHC	0.5000	0.3756	75	0.3958	79	50-135	36-149	5	0-25	
Heptachlor	0.5000	0.3931	79	0.4303	86	50-135	36-149	9	0-25	
Delta-BHC	0.5000	0.3769	75	0.3967	79	50-135	36-149	5	0-25	
Aldrin	0.5000	0.3750	75	0.4093	82	50-135	36-149	9	0-25	
Heptachlor Epoxide	0.5000	0.3939	79	0.4166	83	50-135	36-149	6	0-25	
Endosulfan I	0.5000	0.4010	80	0.4201	84	50-135	36-149	5	0-25	
Dieldrin	0.5000	0.4120	82	0.4315	86	50-135	36-149	5	0-25	
4,4'-DDE	0.5000	0.4012	80	0.4186	84	50-135	36-149	4	0-25	
Endrin	0.5000	0.4286	86	0.4522	90	50-135	36-149	5	0-25	
Endrin Aldehyde	0.5000	0.4061	81	0.4391	88	50-135	36-149	8	0-25	
4,4'-DDD	0.5000	0.4052	81	0.4195	84	50-135	36-149	3	0-25	
Endosulfan II	0.5000	0.4058	81	0.4243	85	50-135	36-149	4	0-25	
4,4'-DDT	0.5000	0.4135	83	0.4285	86	50-135	36-149	4	0-25	
Endosulfan Sulfate	0.5000	0.4002	80	0.4267	85	50-135	36-149	6	0-25	
Methoxychlor	0.5000	0.4363	87	0.4548	91	50-135	36-149	4	0-25	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



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Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 11/04/15
Work Order: 15-11-0230
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-704-3	LCS	Aqueous	GC 44	11/09/15	11/10/15 12:29	151109L01
099-16-704-3	LCSD	Aqueous	GC 44	11/09/15	11/10/15 12:43	151109L01

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	33.35	23.13	69	26.74	80	50-150	33-167	14	0-25	
4,4'-DDD	33.35	25.88	78	28.82	86	50-150	33-167	11	0-25	
4,4'-DDE	33.35	25.31	76	28.00	84	50-150	33-167	10	0-25	
4,4'-DDT	33.35	26.57	80	29.53	89	50-150	33-167	11	0-25	
Alpha Chlordane	33.35	24.49	73	27.08	81	50-150	33-167	10	0-25	
Dieldrin	33.35	26.48	79	28.88	87	50-150	33-167	9	0-25	
Gamma Chlordane	33.35	24.66	74	27.31	82	50-150	33-167	10	0-25	
Endrin	33.35	29.94	90	32.86	99	50-150	33-167	9	0-25	
Gamma-BHC	33.35	25.31	76	29.31	88	50-150	33-167	15	0-25	
Heptachlor	33.35	25.94	78	30.51	91	50-150	33-167	16	0-25	
Heptachlor Epoxide	33.35	24.69	74	27.40	82	50-150	33-167	10	0-25	

Total number of LCS compounds: 11

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Sample Analysis Summary Report

Work Order: 15-11-0230

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8081A	EPA 3510C	669	GC 44	1
EPA 8081A	EPA 3510C	960	GC 44	1


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Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 15-11-0230

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

INSTRUCTIONS FOR LAB PERSONNEL:

GeoTracker EDF required? ☐ Yes ☒ Yes ☐ No

Equis 4-file EDWEDD required? ☒ Yes ☐ No

Specify analytic/prep method and detection limit in report.

Notify us of any anomalous peaks in GC or other scans.

Call immediately with any questions or problems.

GeoTracker EDF required? ☐ Yes ☒ No
 Equis 4-file EDWEDD required? ☒ Yes ☐ No
 Specify analytic/prep method and detection limit in report.
 Notify us of any anomalous peaks in GC or other scans.
 Call immediately with any questions or problems.

Equis 4-file EDWEDD required? ☒ **Yes** ☐ **No**
Specify analytic/prep method and detection limit in report.
Notify us of any anomalous peaks in GC or other scans.
Call immediately with any questions or problems.

INSTRUCTIONS FOR LAB PERSONNEL:

GeoTracker EDF required? ☐ Yes ☒ Yes ☐ No

Equis 4-file EDWEDD required? ☒ Yes ☐ No

Specify analytic/prep method and detection limit in report.

Notify us of any anomalous peaks in GC or other scans.

Call immediately with any questions or problems.

● = Samples received from a secured, locked area

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Weiss Assoc.

DATE: 11 / 04 / 2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2 (CF:-0.4°C); Temperature (w/o CF): 1.9 °C (w/ CF): 1.5 °C; ☒ Blank ☐ Sample☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling☐ Sample(s) received at ambient temperature; placed on ice for transport by courierAmbient Temperature: ☐ Air ☐ Filter

Checked by: 836

CUSTODY SEAL:

Cooler ☒ Present and Intact☐ Present but Not Intact☐ Not Present☐ N/A

Checked by: 836

Sample(s) ☐ Present and Intact☐ Present but Not Intact☐ Not Present☒ N/A

Checked by: 1048

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Container(s) for certain analysis free of headspace	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna₂ ☐ 100PJ ☐ 100PJna₂ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB☐ 125PBznna ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs☐ 500PB ☒ 1AGB ☐ 1AGBna₂ ☐ 1AGBs ☐ 1PB ☐ 1PBna ☐ _____ ☐ _____ ☐ _____Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ Other Matrix (_____) ☐ _____ ☐ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1048s = H₂SO₄, u = ultra-pure, znna = Zn(CH₃CO₂)₂ + NaOH

Reviewed by: 836



WORK ORDER NUMBER: 15-11-0231

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Weiss Associates

Client Project Name: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Attention: Scott Bourne
2200 Powell Street
Suite 925
Emeryville, CA 94608-1879

A handwritten signature in black ink, reading "Virendra R. Patel", enclosed in a hand-drawn oval.

Approved for release on 11/11/2015 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



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Client Project Name: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3
 Work Order Number: 15-11-0231

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Work Order Narrative

Work Order: 15-11-0231Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 11/04/15. They were assigned to Work Order 15-11-0231.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



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Sample Summary

Client: Weiss Associates	Work Order: 15-11-0231
2200 Powell Street, Suite 925	Project Name: LRT 2014-2015 Annual Storm Water Sampling /
Emeryville, CA 94608-1879	426-2026.01 Task 1.1.3
	PO Number:
	Date/Time Received: 11/04/15 10:25
	Number of Containers: 3

Attn: Scott Bourne

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TS2-E-2015-1	15-11-0231-1	11/02/15 08:10	3	Aqueous


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Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 11/04/15
Work Order: 15-11-0231
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-E-2015-1	15-11-0231-1-A	11/02/15 08:10	Aqueous	GC 44	11/05/15	11/06/15 13:30	151105L14

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.096	0.027	1.00	
Beta-BHC	ND	0.096	0.029	1.00	
Delta-BHC	ND	0.096	0.027	1.00	
Endosulfan I	ND	0.096	0.027	1.00	
Endrin Aldehyde	ND	0.096	0.025	1.00	
Endosulfan II	ND	0.096	0.026	1.00	
Endosulfan Sulfate	ND	0.096	0.028	1.00	
Methoxychlor	ND	0.096	0.024	1.00	
Chlordane	ND	0.96	0.32	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	79	50-135	
2,4,5,6-Tetrachloro-m-Xylene	84	50-135	

Method Blank	099-12-529-854	N/A	Aqueous	GC 44	11/05/15	11/06/15 12:04	151105L14
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	81	50-135	
2,4,5,6-Tetrachloro-m-Xylene	82	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 11/04/15
Work Order: 15-11-0231
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-E-2015-1	15-11-0231-1-AB	11/02/15 08:10	Aqueous	GC 44	11/09/15	11/10/15 13:26	151109L01

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	78	50-150	
2,4,5,6-Tetrachloro-m-Xylene	88	50-150	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 11/04/15
Work Order: 15-11-0231
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-704-3	N/A	Aqueous	GC 44	11/09/15	11/10/15 12:57	151109L01

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	59	50-150	
2,4,5,6-Tetrachloro-m-Xylene	78	50-150	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 11/04/15
Work Order: 15-11-0231
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-529-854	LCS	Aqueous	GC 44	11/05/15	11/06/15 12:18	151105L14
099-12-529-854	LCSD	Aqueous	GC 44	11/05/15	11/06/15 12:32	151105L14

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.3722	74	0.4025	81	50-135	36-149	8	0-25	
Gamma-BHC	0.5000	0.3891	78	0.4174	83	50-135	36-149	7	0-25	
Beta-BHC	0.5000	0.3756	75	0.3958	79	50-135	36-149	5	0-25	
Heptachlor	0.5000	0.3931	79	0.4303	86	50-135	36-149	9	0-25	
Delta-BHC	0.5000	0.3769	75	0.3967	79	50-135	36-149	5	0-25	
Aldrin	0.5000	0.3750	75	0.4093	82	50-135	36-149	9	0-25	
Heptachlor Epoxide	0.5000	0.3939	79	0.4166	83	50-135	36-149	6	0-25	
Endosulfan I	0.5000	0.4010	80	0.4201	84	50-135	36-149	5	0-25	
Dieldrin	0.5000	0.4120	82	0.4315	86	50-135	36-149	5	0-25	
4,4'-DDE	0.5000	0.4012	80	0.4186	84	50-135	36-149	4	0-25	
Endrin	0.5000	0.4286	86	0.4522	90	50-135	36-149	5	0-25	
Endrin Aldehyde	0.5000	0.4061	81	0.4391	88	50-135	36-149	8	0-25	
4,4'-DDD	0.5000	0.4052	81	0.4195	84	50-135	36-149	3	0-25	
Endosulfan II	0.5000	0.4058	81	0.4243	85	50-135	36-149	4	0-25	
4,4'-DDT	0.5000	0.4135	83	0.4285	86	50-135	36-149	4	0-25	
Endosulfan Sulfate	0.5000	0.4002	80	0.4267	85	50-135	36-149	6	0-25	
Methoxychlor	0.5000	0.4363	87	0.4548	91	50-135	36-149	4	0-25	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 11/04/15
Work Order: 15-11-0231
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2014-2015 Annual Storm Water Sampling / 426-
2026.01 Task 1.1.3

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-704-3	LCS	Aqueous		GC 44	11/09/15	11/10/15 12:29	151109L01			
099-16-704-3	LCSD	Aqueous		GC 44	11/09/15	11/10/15 12:43	151109L01			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	33.35	23.13	69	26.74	80	50-150	33-167	14	0-25	
4,4'-DDD	33.35	25.88	78	28.82	86	50-150	33-167	11	0-25	
4,4'-DDE	33.35	25.31	76	28.00	84	50-150	33-167	10	0-25	
4,4'-DDT	33.35	26.57	80	29.53	89	50-150	33-167	11	0-25	
Alpha Chlordane	33.35	24.49	73	27.08	81	50-150	33-167	10	0-25	
Dieldrin	33.35	26.48	79	28.88	87	50-150	33-167	9	0-25	
Gamma Chlordane	33.35	24.66	74	27.31	82	50-150	33-167	10	0-25	
Endrin	33.35	29.94	90	32.86	99	50-150	33-167	9	0-25	
Gamma-BHC	33.35	25.31	76	29.31	88	50-150	33-167	15	0-25	
Heptachlor	33.35	25.94	78	30.51	91	50-150	33-167	16	0-25	
Heptachlor Epoxide	33.35	24.69	74	27.40	82	50-150	33-167	10	0-25	

Total number of LCS compounds: 11

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Sample Analysis Summary Report

Work Order: 15-11-0231

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8081A	EPA 3510C	669	GC 44	1
EPA 8081A	EPA 3510C	960	GC 44	1


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Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 15-11-0231

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

CalSciene Environmental Lab
5063 Commercial Circle, Suite H
Concord, CA 94520
phone: 925-689-9022

Please send analytic results, electronic deliverables and the original chain-of-custody form to:

labresults@weiss.com
bpb@weiss.com
sab@weiss.com

GeoTracker EDF required? ☐ Yes ☒ No
 Equis 4-file EDWEDD required? ☒ Yes ☐ No
 Specify analytic/prep method and detection limit in report.
 Notify us of any anomalous peaks in GC or other scans.
 Call immediately with any questions or problems.

15-11-0231

[illegible]

[X] = Samples released to a secured, locked area.

● = Samples received from a secured, locked area

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Weiss Assoc.

DATE: 11 / 04 / 2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2 (CF:-0.4°C); Temperature (w/o CF): 1.9 °C (w/ CF): 1.5 °C; ☒ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: 836
CUSTODY SEAL:

Cooler ☒ Present and Intact

☐ Present but Not Intact

☐ Not Present

☐ N/A

Checked by: 836

Sample(s) ☐ Present and Intact

☐ Present but Not Intact

☐ Not Present

☒ N/A

Checked by: 1048
SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Container(s) for certain analysis free of headspace	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA_h ☐ VOA_{na2} ☐ 100PJ ☐ 100PJ_{na2} ☐ 125AGB ☐ 125AGB_h ☐ 125AGB_p ☐ 125PB

☐ 125PB_{znna} ☐ 250AGB ☐ 250CGB ☐ 250CGB_s ☐ 250PB ☐ 250PB_n ☐ 500AGB ☐ 500AGJ ☐ 500AGJ_s
☐ 500PB ☒ 1AGB ☐ 1AGB_{na2} ☐ 1AGB_s ☐ 1PB ☐ 1PB_{na} ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ Other Matrix (_____) ☐ _____ ☐ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1048

s = H₂SO₄, u = ultra-pure, znna = Zn(CH₃CO₂)₂ + NaOH

Reviewed by: 836

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925)484-1919

TestAmerica Job ID: 720-68354-1

Client Project/Site: LRTC 2014-2015 Annual
StormWaterSampling

For:

Weiss Associates

2200 Powell Street

Suite 925

Emeryville, California 94608

Attn: Mr. Scott Bourne



Authorized for release by:

11/12/2015 12:09:23 PM

Micah Smith, Project Manager II

(925)484-1919

micah.smith@testamericainc.com

LINKS

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results through

TotalAccess

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Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual StormWaterSampling

TestAmerica Job ID: 720-68354-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual StormWaterSampling

TestAmerica Job ID: 720-68354-1

Job ID: 720-68354-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative 720-68354-1

Comments

No additional comments.

Receipt

The samples were received on 11/2/2015 6:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.4° C.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method(s) 1664A: Analysis for Hexane Extractable Material (HEM) was performed for the following samples: TS2-E-2015-1 (720-68354-1), FD-2015-1 (720-68354-2) and SW-11-2015-1 (720-68354-3). Since the HEM result(s) was below the reporting limit (RL), the result(s) for Silica Gel Treated - Hexane Extractable Material (SGT-HEM) was reported as a non-detect. All HEM quality control criteria were met.

Method(s) 1664A: Elevated reporting limits are provided for the following samples due to insufficient sample provided for 1664A preparation/analysis: TS2-E-2015-1 (720-68354-1) and FD-2015-1 (720-68354-2).

Method(s) 1664A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-292731 and analytical batch 440-292819. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual StormWaterSampling

TestAmerica Job ID: 720-68354-1

Client Sample ID: TS2-E-2015-1

Lab Sample ID: 720-68354-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Copper	0.0071		0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	0.092		0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.0043		0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.0012	B	0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.091		0.0070	0.0019	mg/L	1			200.8	Total/NA
Total Suspended Solids	4.8		1.3	0.63	mg/L	1			SM 2540D	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	8.00		0.100	0.100	SU	1			9040B	Total/NA

Client Sample ID: FD-2015-1

Lab Sample ID: 720-68354-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Copper	0.0064		0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	0.077		0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.0042		0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.0011	B	0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.092		0.0070	0.0019	mg/L	1			200.8	Total/NA
Total Suspended Solids	4.8		1.3	0.63	mg/L	1			SM 2540D	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	8.01		0.100	0.100	SU	1			9040B	Total/NA

Client Sample ID: SW-11-2015-1

Lab Sample ID: 720-68354-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Copper	0.0031		0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	0.32		0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.0045		0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.0016	B	0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.14		0.0070	0.0019	mg/L	1			200.8	Total/NA
Total Suspended Solids	7.5		1.7	0.83	mg/L	1			SM 2540D	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	8.10		0.100	0.100	SU	1			9040B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual StormWaterSampling

TestAmerica Job ID: 720-68354-1

Client Sample ID: TS2-E-2015-1

Date Collected: 11/02/15 08:10

Date Received: 11/02/15 18:15

Lab Sample ID: 720-68354-1

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		11/04/15 19:41	11/05/15 15:16	1
Copper	0.0071		0.0020	0.00060	mg/L		11/04/15 19:41	11/05/15 15:16	1
Iron	0.092		0.040	0.0058	mg/L		11/04/15 19:41	11/05/15 15:16	1
Nickel	0.0043		0.0030	0.00040	mg/L		11/04/15 19:41	11/05/15 15:16	1
Lead	0.0012	B	0.00040	0.000034	mg/L		11/04/15 19:41	11/05/15 15:16	1
Zinc	0.091		0.0070	0.0019	mg/L		11/04/15 19:41	11/05/15 15:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	<1.6		5.8	1.6	mg/L		11/10/15 08:14	11/10/15 13:24	1
Total Suspended Solids	4.8		1.3	0.63	mg/L			11/04/15 20:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.00		0.100	0.100	SU			11/02/15 19:20	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual StormWaterSampling

TestAmerica Job ID: 720-68354-1

Client Sample ID: FD-2015-1

Date Collected: 11/02/15 08:15

Date Received: 11/02/15 18:15

Lab Sample ID: 720-68354-2

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		11/04/15 19:41	11/05/15 15:21	1
Copper	0.0064		0.0020	0.00060	mg/L		11/04/15 19:41	11/05/15 15:21	1
Iron	0.077		0.040	0.0058	mg/L		11/04/15 19:41	11/05/15 15:21	1
Nickel	0.0042		0.0030	0.00040	mg/L		11/04/15 19:41	11/05/15 15:21	1
Lead	0.0011	B	0.00040	0.000034	mg/L		11/04/15 19:41	11/05/15 15:21	1
Zinc	0.092		0.0070	0.0019	mg/L		11/04/15 19:41	11/05/15 15:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	<1.6		5.8	1.6	mg/L		11/10/15 08:14	11/10/15 13:24	1
Total Suspended Solids	4.8		1.3	0.63	mg/L			11/04/15 20:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.01		0.100	0.100	SU			11/02/15 19:22	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual StormWaterSampling

TestAmerica Job ID: 720-68354-1

Client Sample ID: SW-11-2015-1

Date Collected: 11/02/15 10:03

Date Received: 11/02/15 18:15

Lab Sample ID: 720-68354-3

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		11/04/15 19:41	11/05/15 15:25	1
Copper	0.0031		0.0020	0.00060	mg/L		11/04/15 19:41	11/05/15 15:25	1
Iron	0.32		0.040	0.0058	mg/L		11/04/15 19:41	11/05/15 15:25	1
Nickel	0.0045		0.0030	0.00040	mg/L		11/04/15 19:41	11/05/15 15:25	1
Lead	0.0016	B	0.00040	0.000034	mg/L		11/04/15 19:41	11/05/15 15:25	1
Zinc	0.14		0.0070	0.0019	mg/L		11/04/15 19:41	11/05/15 15:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	<1.5		5.2	1.5	mg/L		11/10/15 08:14	11/10/15 13:24	1
Total Suspended Solids	7.5		1.7	0.83	mg/L			11/04/15 20:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.10		0.100	0.100	SU			11/02/15 19:24	1

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual StormWaterSampling

TestAmerica Job ID: 720-68354-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-204935/10-A
Matrix: Water
Analysis Batch: 205036

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 204935

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		11/04/15 19:41	11/05/15 16:11	1
Copper	<0.00060		0.0020	0.00060	mg/L		11/04/15 19:41	11/05/15 16:11	1
Iron	<0.0058		0.040	0.0058	mg/L		11/04/15 19:41	11/05/15 16:11	1
Nickel	<0.00040		0.0030	0.00040	mg/L		11/04/15 19:41	11/05/15 16:11	1
Lead	0.0000426	J	0.00040	0.000034	mg/L		11/04/15 19:41	11/05/15 16:11	1
Zinc	<0.0019		0.0070	0.0019	mg/L		11/04/15 19:41	11/05/15 16:11	1

Lab Sample ID: LCS 580-204935/11-A
Matrix: Water
Analysis Batch: 205036

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 204935

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	1.00	1.01		mg/L		101	85 - 115
Copper	0.100	0.101		mg/L		101	85 - 115
Iron	10.0	10.6		mg/L		106	85 - 115
Nickel	0.100	0.100		mg/L		100	85 - 115
Lead	0.100	0.108		mg/L		108	85 - 115
Zinc	0.100	0.0997		mg/L		100	85 - 115

Lab Sample ID: LCSD 580-204935/12-A
Matrix: Water
Analysis Batch: 205036

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 204935

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Aluminum	1.00	1.01		mg/L		101	85 - 115	1	20
Copper	0.100	0.102		mg/L		102	85 - 115	1	20
Iron	10.0	10.5		mg/L		105	85 - 115	0	20
Nickel	0.100	0.101		mg/L		101	85 - 115	1	20
Lead	0.100	0.108		mg/L		108	85 - 115	0	20
Zinc	0.100	0.100		mg/L		100	85 - 115	0	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 440-292731/1-A
Matrix: Water
Analysis Batch: 292819

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 292731

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	<1.4		5.0	1.4	mg/L		11/10/15 08:14	11/10/15 13:24	1

Lab Sample ID: LCS 440-292731/2-A
Matrix: Water
Analysis Batch: 292819

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 292731

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
SGT-HEM	20.0	16.1		mg/L		81	64 - 132

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual StormWaterSampling

TestAmerica Job ID: 720-68354-1

Method: 1664A - HEM and SGT-HEM (Continued)

Lab Sample ID: LCSD 440-292731/3-A

Matrix: Water

Analysis Batch: 292819

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 292731

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
SGT-HEM	20.0	16.0		mg/L	-	80	64 - 132	1	28

Method: 9040B - pH

Lab Sample ID: LCS 720-191866/1

Matrix: Water

Analysis Batch: 191866

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.010		SU	-	100	99 - 101

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-291661/1

Matrix: Water

Analysis Batch: 291661

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<0.50		1.0	0.50	mg/L	-		11/04/15 20:30	1

Lab Sample ID: LCS 440-291661/2

Matrix: Water

Analysis Batch: 291661

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	974		mg/L	-	97	85 - 115

TestAmerica Pleasanton

QC Association Summary

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual StormWaterSampling

TestAmerica Job ID: 720-68354-1

Metals

Prep Batch: 204935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68354-1	TS2-E-2015-1	Total/NA	Water	200.8	
720-68354-2	FD-2015-1	Total/NA	Water	200.8	
720-68354-3	SW-11-2015-1	Total/NA	Water	200.8	
LCS 580-204935/11-A	Lab Control Sample	Total/NA	Water	200.8	
LCSD 580-204935/12-A	Lab Control Sample Dup	Total/NA	Water	200.8	
MB 580-204935/10-A	Method Blank	Total/NA	Water	200.8	

Analysis Batch: 205036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68354-1	TS2-E-2015-1	Total/NA	Water	200.8	204935
720-68354-2	FD-2015-1	Total/NA	Water	200.8	204935
720-68354-3	SW-11-2015-1	Total/NA	Water	200.8	204935
LCS 580-204935/11-A	Lab Control Sample	Total/NA	Water	200.8	204935
LCSD 580-204935/12-A	Lab Control Sample Dup	Total/NA	Water	200.8	204935
MB 580-204935/10-A	Method Blank	Total/NA	Water	200.8	204935

General Chemistry

Analysis Batch: 191866

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68354-1	TS2-E-2015-1	Total/NA	Water	9040B	
720-68354-2	FD-2015-1	Total/NA	Water	9040B	
720-68354-3	SW-11-2015-1	Total/NA	Water	9040B	
LCS 720-191866/1	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 291661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68354-1	TS2-E-2015-1	Total/NA	Water	SM 2540D	
720-68354-2	FD-2015-1	Total/NA	Water	SM 2540D	
720-68354-3	SW-11-2015-1	Total/NA	Water	SM 2540D	
LCS 440-291661/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 440-291661/1	Method Blank	Total/NA	Water	SM 2540D	

Prep Batch: 292731

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68354-1	TS2-E-2015-1	Total/NA	Water	1664A	
720-68354-2	FD-2015-1	Total/NA	Water	1664A	
720-68354-3	SW-11-2015-1	Total/NA	Water	1664A	
LCS 440-292731/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 440-292731/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 440-292731/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 292819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68354-1	TS2-E-2015-1	Total/NA	Water	1664A	292731
720-68354-2	FD-2015-1	Total/NA	Water	1664A	292731
720-68354-3	SW-11-2015-1	Total/NA	Water	1664A	292731
LCS 440-292731/2-A	Lab Control Sample	Total/NA	Water	1664A	292731
LCSD 440-292731/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	292731
MB 440-292731/1-A	Method Blank	Total/NA	Water	1664A	292731

TestAmerica Pleasanton

Lab Chronicle

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual StormWaterSampling

TestAmerica Job ID: 720-68354-1

Client Sample ID: TS2-E-2015-1

Date Collected: 11/02/15 08:10

Date Received: 11/02/15 18:15

Lab Sample ID: 720-68354-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			204935	11/04/15 19:41	PAB	TAL SEA
Total/NA	Analysis	200.8		1	205036	11/05/15 15:16	FCW	TAL SEA
Total/NA	Prep	1664A			292731	11/10/15 08:14	L1A	TAL IRV
Total/NA	Analysis	1664A		1	292819	11/10/15 13:24	L1A	TAL IRV
Total/NA	Analysis	9040B		1	191866	11/02/15 19:20	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	291661	11/04/15 20:30	MMH	TAL IRV

Client Sample ID: FD-2015-1

Date Collected: 11/02/15 08:15

Date Received: 11/02/15 18:15

Lab Sample ID: 720-68354-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			204935	11/04/15 19:41	PAB	TAL SEA
Total/NA	Analysis	200.8		1	205036	11/05/15 15:21	FCW	TAL SEA
Total/NA	Prep	1664A			292731	11/10/15 08:14	L1A	TAL IRV
Total/NA	Analysis	1664A		1	292819	11/10/15 13:24	L1A	TAL IRV
Total/NA	Analysis	9040B		1	191866	11/02/15 19:22	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	291661	11/04/15 20:30	MMH	TAL IRV

Client Sample ID: SW-11-2015-1

Date Collected: 11/02/15 10:03

Date Received: 11/02/15 18:15

Lab Sample ID: 720-68354-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			204935	11/04/15 19:41	PAB	TAL SEA
Total/NA	Analysis	200.8		1	205036	11/05/15 15:25	FCW	TAL SEA
Total/NA	Prep	1664A			292731	11/10/15 08:14	L1A	TAL IRV
Total/NA	Analysis	1664A		1	292819	11/10/15 13:24	L1A	TAL IRV
Total/NA	Analysis	9040B		1	191866	11/02/15 19:24	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	291661	11/04/15 20:30	MMH	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Pleasanton

Certification Summary

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual StormWaterSampling

TestAmerica Job ID: 720-68354-1

Laboratory: TestAmerica Pleasanton

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16
Analysis Method	Prep Method	Matrix	Analyte	

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2706	06-30-16
The following analytes are included in this report, but certification is not offered by the governing authority:				
Analysis Method	Prep Method	Matrix	Analyte	
1664A	1664A	Water	SGT-HEM	

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

Method Summary

Client: Weiss Associates

TestAmerica Job ID: 720-68354-1

Project/Site: LRTC 2014-2015 Annual StormWaterSampling

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	TAL SEA
1664A	HEM and SGT-HEM	1664A	TAL IRV
9040B	pH	SW846	TAL PLS
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV

Protocol References:

1664A = EPA-821-98-002

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Weiss Associates

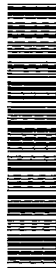
TestAmerica Job ID: 720-68354-1

Project/Site: LRTC 2014-2015 Annual StormWaterSampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-68354-1	TS2-E-2015-1	Water	11/02/15 08:10	11/02/15 18:15
720-68354-2	FD-2015-1	Water	11/02/15 08:15	11/02/15 18:15
720-68354-3	SW-11-2015-1	Water	11/02/15 10:03	11/02/15 18:15

TestAmerica Pleasanton

Chain of Custody Record



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

[illegible]

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

2. Once the problem is identified, the next step is to define the objectives and goals of the project. This helps to clarify what needs to be achieved and provides a clear direction for the team.

3. The third step is to develop a plan or strategy to address the problem. This involves breaking down the problem into smaller, manageable tasks and determining the resources needed to complete each task.

4. The fourth step is to implement the plan. This involves putting the strategy into action and monitoring progress regularly to ensure that the project is on track.

5. The final step is to evaluate the results of the project. This involves assessing the outcomes against the objectives and goals and identifying any lessons learned for future projects.

THE LUGGER'S ENVIRONMENTAL TESTING

Phone (925) 484-1919 Fax (925) 600-3002

[illegible]

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-68354-1

Login Number: 68354

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Bullock, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-68354-1

Login Number: 68354

List Number: 2

Creator: Garcia, Veronica G

List Source: TestAmerica Irvine

List Creation: 11/04/15 03:01 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-68354-1

Login Number: 68354

List Number: 3

Creator: Vance, Diane R

List Source: TestAmerica Seattle

List Creation: 11/04/15 04:59 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-68354-1

Login Number: 68354

List Number: 4

Creator: Vance, Diane R

List Source: TestAmerica Seattle

List Creation: 11/04/15 05:00 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925)484-1919

TestAmerica Job ID: 720-68356-1

Client Project/Site: LRTC Stormwater

For:

Weiss Associates

2200 Powell Street

Suite 925

Emeryville, California 94608

Attn: Mr. Scott Bourne



Authorized for release by:

11/12/2015 12:26:25 PM

Micah Smith, Project Manager II

(925)484-1919

micah.smith@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68356-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68356-1

Job ID: 720-68356-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-68356-1

Comments

No additional comments.

Receipt

The sample was received on 11/2/2015 6:15 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.4° C.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68356-1

Client Sample ID: TS2-I-2015-1

Lab Sample ID: 720-68356-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	1.9		0.10	0.10	mg/L	1		200.8	Total/NA
Copper	0.026		0.0020	0.00060	mg/L	1		200.8	Total/NA
Iron	3.1		0.040	0.0058	mg/L	1		200.8	Total/NA
Nickel	0.011		0.0030	0.00040	mg/L	1		200.8	Total/NA
Lead	0.076	B	0.00040	0.000034	mg/L	1		200.8	Total/NA
Zinc	0.57		0.0070	0.0019	mg/L	1		200.8	Total/NA
Total Suspended Solids	240		20	10	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68356-1

Client Sample ID: TS2-I-2015-1

Date Collected: 11/02/15 09:30

Date Received: 11/02/15 18:15

Lab Sample ID: 720-68356-1

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.9		0.10	0.10	mg/L		11/04/15 19:41	11/05/15 15:30	1
Copper	0.026		0.0020	0.00060	mg/L		11/04/15 19:41	11/05/15 15:30	1
Iron	3.1		0.040	0.0058	mg/L		11/04/15 19:41	11/05/15 15:30	1
Nickel	0.011		0.0030	0.00040	mg/L		11/04/15 19:41	11/05/15 15:30	1
Lead	0.076	B	0.00040	0.000034	mg/L		11/04/15 19:41	11/05/15 15:30	1
Zinc	0.57		0.0070	0.0019	mg/L		11/04/15 19:41	11/05/15 15:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	240		20	10	mg/L			11/04/15 20:30	1

QC Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68356-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-204935/10-A

Matrix: Water

Analysis Batch: 205036

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 204935

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		11/04/15 19:41	11/05/15 16:11	1
Copper	<0.00060		0.0020	0.00060	mg/L		11/04/15 19:41	11/05/15 16:11	1
Iron	<0.0058		0.040	0.0058	mg/L		11/04/15 19:41	11/05/15 16:11	1
Nickel	<0.00040		0.0030	0.00040	mg/L		11/04/15 19:41	11/05/15 16:11	1
Lead	0.0000426	J	0.00040	0.000034	mg/L		11/04/15 19:41	11/05/15 16:11	1
Zinc	<0.0019		0.0070	0.0019	mg/L		11/04/15 19:41	11/05/15 16:11	1

Lab Sample ID: LCS 580-204935/11-A

Matrix: Water

Analysis Batch: 205036

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 204935

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	1.00	1.01		mg/L		101	85 - 115
Copper	0.100	0.101		mg/L		101	85 - 115
Iron	10.0	10.6		mg/L		106	85 - 115
Nickel	0.100	0.100		mg/L		100	85 - 115
Lead	0.100	0.108		mg/L		108	85 - 115
Zinc	0.100	0.0997		mg/L		100	85 - 115

Lab Sample ID: LCSD 580-204935/12-A

Matrix: Water

Analysis Batch: 205036

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 204935

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	1.00	1.01		mg/L		101	85 - 115	1	20
Copper	0.100	0.102		mg/L		102	85 - 115	1	20
Iron	10.0	10.5		mg/L		105	85 - 115	0	20
Nickel	0.100	0.101		mg/L		101	85 - 115	1	20
Lead	0.100	0.108		mg/L		108	85 - 115	0	20
Zinc	0.100	0.100		mg/L		100	85 - 115	0	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-291661/1

Matrix: Water

Analysis Batch: 291661

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<0.50		1.0	0.50	mg/L			11/04/15 20:30	1

Lab Sample ID: LCS 440-291661/2

Matrix: Water

Analysis Batch: 291661

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	974		mg/L		97	85 - 115

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68356-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: 720-68356-1 DU
Matrix: Water
Analysis Batch: 291661

Client Sample ID: TS2-I-2015-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	240		250		mg/L	—	4	10

QC Association Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68356-1

Metals

Prep Batch: 204935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68356-1	TS2-I-2015-1	Total/NA	Water	200.8	
LCS 580-204935/11-A	Lab Control Sample	Total/NA	Water	200.8	
LCSD 580-204935/12-A	Lab Control Sample Dup	Total/NA	Water	200.8	
MB 580-204935/10-A	Method Blank	Total/NA	Water	200.8	

Analysis Batch: 205036

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68356-1	TS2-I-2015-1	Total/NA	Water	200.8	204935
LCS 580-204935/11-A	Lab Control Sample	Total/NA	Water	200.8	204935
LCSD 580-204935/12-A	Lab Control Sample Dup	Total/NA	Water	200.8	204935
MB 580-204935/10-A	Method Blank	Total/NA	Water	200.8	204935

General Chemistry

Analysis Batch: 291661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68356-1	TS2-I-2015-1	Total/NA	Water	SM 2540D	
720-68356-1 DU	TS2-I-2015-1	Total/NA	Water	SM 2540D	
LCS 440-291661/2	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 440-291661/1	Method Blank	Total/NA	Water	SM 2540D	

Lab Chronicle

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68356-1

Client Sample ID: TS2-I-2015-1

Date Collected: 11/02/15 09:30

Date Received: 11/02/15 18:15

Lab Sample ID: 720-68356-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			204935	11/04/15 19:41	PAB	TAL SEA
Total/NA	Analysis	200.8		1	205036	11/05/15 15:30	FCW	TAL SEA
Total/NA	Analysis	SM 2540D		1	291661	11/04/15 20:30	MMH	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68356-1

Laboratory: TestAmerica Pleasanton

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16

Laboratory: TestAmerica Irvine

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2706	06-30-16

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

Method Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68356-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	TAL SEA
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater",

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68356-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-68356-1	TS2-I-2015-1	Water	11/02/15 09:30	11/02/15 18:15

1

2

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11

12

13

14

164772

Sample Specific Notes:

720-68356 Chain of Custody

0.4c

Phone (925) 484-1919 Fax (925) 600-3002

Chain of Custody Record



TestAmerica

THE READER IN ENVIRONMENTAL TESTING

[illegible]

Pleasanton, CA 94566
Phone (925) 484-1919 Fax (925) 600-3002

1. The first step is to identify the problem or question that needs to be addressed. This involves understanding the context and the specific requirements of the task.

2. Next, it is important to gather relevant information and data. This can be done through research, consultation with experts, or by analyzing existing resources.

3. Once the information is gathered, the next step is to develop a plan or strategy. This involves breaking down the problem into smaller, manageable parts and determining the best approach to solve each part.

4. The fourth step is to implement the plan. This involves putting the strategy into action and monitoring progress as you go.

5. Finally, it is important to evaluate the results and make adjustments as needed. This involves reflecting on what worked well and what didn't, and using that information to improve future performance.

THE LEADER IN ENVIRONMENTAL TESTING

11/12/2015

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-68356-1

Login Number: 68356

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Bullock, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-68356-1

Login Number: 68356

List Number: 2

Creator: Garcia, Veronica G

List Source: TestAmerica Irvine

List Creation: 11/04/15 01:32 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-68356-1

Login Number: 68356

List Number: 3

Creator: Vance, Diane R

List Source: TestAmerica Seattle

List Creation: 11/04/15 05:00 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



WORK ORDER NUMBER: 15-12-0414

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Weiss Associates

Client Project Name: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Attention: Scott Bourne
2200 Powell Street
Suite 925
Emeryville, CA 94608-1879

A handwritten signature in black ink, reading "Virendra R. Patel".

Approved for release on 12/15/2015 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



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Contents

Client Project Name: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3
 Work Order Number: 15-12-0414

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Work Order Narrative

Work Order: 15-12-0414Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 12/05/15. They were assigned to Work Order 15-12-0414.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



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Sample Summary

Client: Weiss Associates	Work Order: 15-12-0414
2200 Powell Street, Suite 925	Project Name: LRT 2015-2016 Annual Storm Water Sampling /
Emeryville, CA 94608-1879	426-2026.01 Task 1.1.3
	PO Number:
	Date/Time Received: 12/05/15 09:20
	Number of Containers: 4

Attn: Scott Bourne

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TS2-E2015-2	15-12-0414-1	12/03/15 15:35	2	Aqueous
FD-2015-2	15-12-0414-2	12/03/15 15:40	2	Aqueous


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QC Association Summary

Work Order: 15-12-0414

Page 1 of 1

<u>Client Sample ID</u>	<u>Method Name</u>	<u>Type</u>	<u>Ext Name</u>	<u>Instrument</u>	<u>MS/MSD/SDP</u>	<u>LCS/LCSD</u>
TS2-E2015-2	EPA 8081A Organochlorine Pesticides		EPA 3510C	GC 44		151208L12
TS2-E2015-2	EPA 8081A Organochlorine Pesticides		EPA 3510C	GC 44		151208L11
FD-2015-2	EPA 8081A Organochlorine Pesticides		EPA 3510C	GC 44		151208L12
FD-2015-2	EPA 8081A Organochlorine Pesticides		EPA 3510C	GC 44		151208L11


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Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0414
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-E2015-2	15-12-0414-1-B	12/03/15 15:35	Aqueous	GC 44	12/08/15	12/09/15 12:16	151208L12

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Gamma-BHC	ND	0.10	0.030	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Heptachlor	ND	0.10	0.026	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Aldrin	ND	0.10	0.027	1.00	
Heptachlor Epoxide	ND	0.10	0.025	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Dieldrin	ND	0.10	0.029	1.00	
4,4'-DDE	ND	0.10	0.027	1.00	
Endrin	ND	0.10	0.031	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
4,4'-DDD	ND	0.10	0.027	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
4,4'-DDT	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	
Toxaphene	ND	2.0	0.59	1.00	
Endrin Ketone	ND	0.10	0.024	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	75	50-135	
2,4,5,6-Tetrachloro-m-Xylene	69	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0414
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FD-2015-2	15-12-0414-2-B	12/03/15 15:40	Aqueous	GC 44	12/08/15	12/09/15 12:30	151208L12

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Gamma-BHC	ND	0.10	0.030	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Heptachlor	ND	0.10	0.026	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Aldrin	ND	0.10	0.027	1.00	
Heptachlor Epoxide	ND	0.10	0.025	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Dieldrin	ND	0.10	0.029	1.00	
4,4'-DDE	ND	0.10	0.027	1.00	
Endrin	ND	0.10	0.031	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
4,4'-DDD	ND	0.10	0.027	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
4,4'-DDT	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	
Toxaphene	ND	2.0	0.59	1.00	
Endrin Ketone	ND	0.10	0.024	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	72	50-135	
2,4,5,6-Tetrachloro-m-Xylene	74	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0414
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-529-857	N/A	Aqueous	GC 44	12/08/15	12/09/15 12:01	151208L12

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Gamma-BHC	ND	0.10	0.030	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Heptachlor	ND	0.10	0.026	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Aldrin	ND	0.10	0.027	1.00	
Heptachlor Epoxide	ND	0.10	0.025	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Dieldrin	ND	0.10	0.029	1.00	
4,4'-DDE	ND	0.10	0.027	1.00	
Endrin	ND	0.10	0.031	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
4,4'-DDD	ND	0.10	0.027	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
4,4'-DDT	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	
Toxaphene	ND	2.0	0.59	1.00	
Endrin Ketone	ND	0.10	0.024	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	78	50-135	
2,4,5,6-Tetrachloro-m-Xylene	86	50-135	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0414
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-E2015-2	15-12-0414-1-AB	12/03/15 15:35	Aqueous	GC 44	12/08/15	12/09/15 13:13	151208L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
2,4'-DDD	ND	1.3	0.50	1.00	
2,4'-DDE	ND	1.3	0.50	1.00	
2,4'-DDT	ND	2.0	1.0	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
4,4'-DDMU	ND	2.0	1.0	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Cis-nonachlor	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Oxychlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Trans-nonachlor	ND	3.3	1.7	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	73	50-150	
2,4,5,6-Tetrachloro-m-Xylene	84	50-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0414
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FD-2015-2	15-12-0414-2-AB	12/03/15 15:40	Aqueous	GC 44	12/08/15	12/09/15 13:27	151208L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
2,4'-DDD	ND	1.3	0.50	1.00	
2,4'-DDE	ND	1.3	0.50	1.00	
2,4'-DDT	ND	2.0	1.0	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
4,4'-DDMU	ND	2.0	1.0	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Cis-nonachlor	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Oxychlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Trans-nonachlor	ND	3.3	1.7	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	88	50-150	
2,4,5,6-Tetrachloro-m-Xylene	85	50-150	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0414
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-704-5	N/A	Aqueous	GC 44	12/08/15	12/09/15 12:59	151208L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
2,4'-DDD	ND	1.3	0.50	1.00	
2,4'-DDE	ND	1.3	0.50	1.00	
2,4'-DDT	ND	2.0	1.0	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
4,4'-DDMU	ND	2.0	1.0	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Cis-nonachlor	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Oxychlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Trans-nonachlor	ND	3.3	1.7	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	65	50-150	
2,4,5,6-Tetrachloro-m-Xylene	67	50-150	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0414
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-529-857	LCS	Aqueous	GC 44	12/08/15	12/09/15 16:08	151208L12
099-12-529-857	LCSD	Aqueous	GC 44	12/08/15	12/09/15 16:22	151208L12

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.3257	65	0.3372	67	50-135	36-149	3	0-25	
Gamma-BHC	0.5000	0.3434	69	0.3426	69	50-135	36-149	0	0-25	
Beta-BHC	0.5000	0.3548	71	0.3191	64	50-135	36-149	11	0-25	
Heptachlor	0.5000	0.3520	70	0.3590	72	50-135	36-149	2	0-25	
Delta-BHC	0.5000	0.3589	72	0.3506	70	50-135	36-149	2	0-25	
Aldrin	0.5000	0.3612	72	0.3679	74	50-135	36-149	2	0-25	
Heptachlor Epoxide	0.5000	0.3682	74	0.3736	75	50-135	36-149	1	0-25	
Endosulfan I	0.5000	0.3632	73	0.3681	74	50-135	36-149	1	0-25	
Dieldrin	0.5000	0.3715	74	0.3814	76	50-135	36-149	3	0-25	
4,4'-DDE	0.5000	0.3858	77	0.3917	78	50-135	36-149	2	0-25	
Endrin	0.5000	0.2693	54	0.3042	61	50-135	36-149	12	0-25	
Endrin Aldehyde	0.5000	0.3551	71	0.3563	71	50-135	36-149	0	0-25	
4,4'-DDD	0.5000	0.3647	73	0.3721	74	50-135	36-149	2	0-25	
Endosulfan II	0.5000	0.3837	77	0.3876	78	50-135	36-149	1	0-25	
4,4'-DDT	0.5000	0.3732	75	0.3887	78	50-135	36-149	4	0-25	
Endosulfan Sulfate	0.5000	0.3380	68	0.3531	71	50-135	36-149	4	0-25	
Methoxychlor	0.5000	0.3503	70	0.3910	78	50-135	36-149	11	0-25	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



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LCS/LCSD - Surrogate

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0414
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
099-12-529-857	LCS	Aqueous	GC 44	12/08/15	12/09/15 16:08	151208L12	
099-12-529-857	LCSD	Aqueous	GC 44	12/08/15	12/09/15 16:22	151208L12	
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	0.01000	0.7710	77	0.7992	80	50-135	
2,4,5,6-Tetrachloro-m-Xylene	0.01000	0.7516	75	0.7811	78	50-135	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0414
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-704-5	LCS	Aqueous		GC 44	12/08/15	12/09/15 16:37	151208L11			
099-16-704-5	LCSD	Aqueous		GC 44	12/08/15	12/09/15 16:51	151208L11			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	33.35	24.04	72	24.05	72	50-150	33-167	0	0-25	
4,4'-DDD	33.35	24.99	75	24.85	75	50-150	33-167	1	0-25	
4,4'-DDE	33.35	25.84	77	25.73	77	50-150	33-167	0	0-25	
4,4'-DDT	33.35	26.12	78	26.01	78	50-150	33-167	0	0-25	
Alpha Chlordane	33.35	25.00	75	24.91	75	50-150	33-167	0	0-25	
Dieldrin	33.35	25.93	78	26.09	78	50-150	33-167	1	0-25	
Gamma Chlordane	33.35	24.55	74	24.48	73	50-150	33-167	0	0-25	
Endrin	33.35	21.61	65	21.22	64	50-150	33-167	2	0-25	
Gamma-BHC	33.35	23.66	71	23.77	71	50-150	33-167	0	0-25	
Heptachlor	33.35	24.55	74	24.60	74	50-150	33-167	0	0-25	
Heptachlor Epoxide	33.35	24.47	73	24.45	73	50-150	33-167	0	0-25	

Total number of LCS compounds: 11

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

LCS/LCSD - Surrogate

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0414
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
099-16-704-5	LCS	Aqueous	GC 44	12/08/15	12/09/15 16:37	151208L11	
099-16-704-5	LCSD	Aqueous	GC 44	12/08/15	12/09/15 16:51	151208L11	
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	66.70	74.56	75	74.02	74	50-150	
2,4,5,6-Tetrachloro-m-Xylene	66.70	75.25	75	76.51	77	50-150	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Sample Analysis Summary Report

Work Order: 15-12-0414

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8081A	EPA 3510C	960	GC 44	1


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Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 15-12-0414

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Revised COC received from Andrew Mill (Weiss) on 12/08/15 at 17:40pm - Virendra (ECI)

Chain of Custody Record

CalSciene Environmental Lab
5063 Commercial Circle, Suite H
Concord, CA 94520
Phone: 925-689-9022

Please send analytic results, electronic deliverables and the original chain-of-custody form to:

labresults@weiss.com
 aljn@weiss.com
 sab@weiss.com

INSTRUCTIONS FOR LAB PERSONNEL:
GeoTracker EDF required? ☐ Yes ☒ No
Equis 4-file EDWEDD required? ☒ Yes ☐ No
Specify analytic/prep method and detection limit in report.
Notify us of any anomalous peaks in GC or other scans.
Call immediately with any questions or problems.

15-12-0414

[illegible]

INSTRUCTIONS FOR LAB PERSONNEL:

GeoTracker EDF required? ☐ Yes ☒ No
 Equis 4-file EDWEDD required? ☒ Yes ☐ No

Specify analytic/prep method and detection limit in report.
 Notify us of any anomalous peaks in GC or other scans.
 Call immediately with any questions or problems.

Equis 4-file EDWEDD required? ☒ **Yes** ☐ **No**
Specify analytic/prep method and detection limit in report.
Notify us of any anomalous peaks in GC or other scans.
Call immediately with any questions or problems.

Specify analytic/prep method and detection limit in report.
 Notify us of any anomalous peaks in GC or other scans.
 Call immediately with any questions or problems.

● = Samples received from a secured, locked area

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Weiss

DATE: 12/05/2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2 (CF:-0.4°C); Temperature (w/o CF): 2.9 °C (w/ CF): 2.5 °C; ☒ Blank ☐ Sample☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling☐ Sample(s) received at ambient temperature; placed on ice for transport by courierAmbient Temperature: ☐ Air ☐ Filter

Checked by: Sur

CUSTODY SEAL:

Cooler ☒ Present and Intact☐ Present but Not Intact☐ Not Present☐ N/A

Checked by: Sur

Sample(s) ☐ Present and Intact☐ Present but Not Intact☒ Not Present☐ N/A

Checked by: 1050

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Container(s) for certain analysis free of headspace	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA_h ☐ VOA_{na2} ☐ 100PJ ☐ 100PJ_{na2} ☐ 125AGB ☐ 125AGB_h ☐ 125AGB_p ☐ 125PB☐ 125PB_{znna} ☐ 250AGB ☐ 250CGB ☐ 250CGB_s ☐ 250PB ☐ 250PB_n ☐ 500AGB ☐ 500AGJ ☐ 500AGJ_s☐ 500PB ☒ 1AGB ☐ 1AGB_{na2} ☐ 1AGB_s ☐ 1PB ☐ 1PB_{na} ☐ _____ ☐ _____ ☐ _____Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ Other Matrix (_____) ☐ _____ ☐ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1050s = H₂SO₄, u = ultra-pure, znna = Zn(CH₃CO₂)₂ + NaOH

Reviewed by: 1017



WORK ORDER NUMBER: 15-12-0415

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Weiss Associates

Client Project Name: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Attention: Scott Bourne
2200 Powell Street
Suite 925
Emeryville, CA 94608-1879

A handwritten signature in black ink, reading "Virendra R. Patel", enclosed in a hand-drawn oval.

Approved for release on 12/15/2015 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



Calscience

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Work Order Narrative

Work Order: 15-12-0415Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 12/05/15. They were assigned to Work Order 15-12-0415.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



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Sample Summary

Client: Weiss Associates	Work Order: 15-12-0415
2200 Powell Street, Suite 925	Project Name: LRT 2015-2016 Annual Storm Water Sampling /
Emeryville, CA 94608-1879	426-2026.01 Task 1.1.3
	PO Number:
	Date/Time Received: 12/05/15 09:20
	Number of Containers: 2

Attn: Scott Bourne

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TS2-I-2015-2	15-12-0415-1	12/03/15 15:15	2	Aqueous


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Calscience

QC Association Summary

Work Order: 15-12-0415

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<u>Client Sample ID</u>	<u>Method Name</u>	<u>Type</u>	<u>Ext Name</u>	<u>Instrument</u>	<u>MS/MSD/SDP</u>	<u>LCS/LCSD</u>
TS2-I-2015-2	EPA 8081A Organochlorine Pesticides		EPA 3510C	GC 44		151208L12
TS2-I-2015-2	EPA 8081A Organochlorine Pesticides		EPA 3510C	GC 44		151208L11


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Calscience

Detections Summary

Client: Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Work Order: 15-12-0415
Project Name: LRT 2015-2016 Annual Storm Water Sampling /
426-2026.01 Task 1.1.3
Received: 12/05/15

Attn: Scott Bourne

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Client SampleID

<u>Analyte</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>Units</u>	<u>Method</u>	<u>Extraction</u>
TS2-I-2015-2 (15-12-0415-1)						
4,4'-DDE	7.5		1.3	ng/L	EPA 8081A	EPA 3510C
4,4'-DDT	22		1.3	ng/L	EPA 8081A	EPA 3510C

Subcontracted analyses, if any, are not included in this summary.


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* MDL is shown



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Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0415
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-I-2015-2	15-12-0415-1-B	12/03/15 15:15	Aqueous	GC 44	12/08/15	12/09/15 12:44	151208L12

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	73	50-135	
2,4,5,6-Tetrachloro-m-Xylene	77	50-135	

Method Blank	099-12-529-857	N/A	Aqueous	GC 44	12/08/15	12/09/15 12:01	151208L12
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	78	50-135	
2,4,5,6-Tetrachloro-m-Xylene	86	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0415
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-I-2015-2	15-12-0415-1-AB	12/03/15 15:15	Aqueous	GC 44	12/08/15	12/09/15 13:41	151208L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
2,4'-DDD	ND	1.3	0.50	1.00	
2,4'-DDE	ND	1.3	0.50	1.00	
2,4'-DDT	ND	2.0	1.0	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	7.5	1.3	0.50	1.00	
4,4'-DDT	22	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	87	50-150	
2,4,5,6-Tetrachloro-m-Xylene	101	50-150	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0415
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-704-5	N/A	Aqueous	GC 44	12/08/15	12/09/15 12:59	151208L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
2,4'-DDD	ND	1.3	0.50	1.00	
2,4'-DDE	ND	1.3	0.50	1.00	
2,4'-DDT	ND	2.0	1.0	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	65	50-150	
2,4,5,6-Tetrachloro-m-Xylene	67	50-150	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0415
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-529-857	LCS	Aqueous	GC 44	12/08/15	12/09/15 16:08	151208L12
099-12-529-857	LCSD	Aqueous	GC 44	12/08/15	12/09/15 16:22	151208L12

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.3257	65	0.3372	67	50-135	36-149	3	0-25	
Gamma-BHC	0.5000	0.3434	69	0.3426	69	50-135	36-149	0	0-25	
Beta-BHC	0.5000	0.3548	71	0.3191	64	50-135	36-149	11	0-25	
Heptachlor	0.5000	0.3520	70	0.3590	72	50-135	36-149	2	0-25	
Delta-BHC	0.5000	0.3589	72	0.3506	70	50-135	36-149	2	0-25	
Aldrin	0.5000	0.3612	72	0.3679	74	50-135	36-149	2	0-25	
Heptachlor Epoxide	0.5000	0.3682	74	0.3736	75	50-135	36-149	1	0-25	
Endosulfan I	0.5000	0.3632	73	0.3681	74	50-135	36-149	1	0-25	
Dieldrin	0.5000	0.3715	74	0.3814	76	50-135	36-149	3	0-25	
4,4'-DDE	0.5000	0.3858	77	0.3917	78	50-135	36-149	2	0-25	
Endrin	0.5000	0.2693	54	0.3042	61	50-135	36-149	12	0-25	
Endrin Aldehyde	0.5000	0.3551	71	0.3563	71	50-135	36-149	0	0-25	
4,4'-DDD	0.5000	0.3647	73	0.3721	74	50-135	36-149	2	0-25	
Endosulfan II	0.5000	0.3837	77	0.3876	78	50-135	36-149	1	0-25	
4,4'-DDT	0.5000	0.3732	75	0.3887	78	50-135	36-149	4	0-25	
Endosulfan Sulfate	0.5000	0.3380	68	0.3531	71	50-135	36-149	4	0-25	
Methoxychlor	0.5000	0.3503	70	0.3910	78	50-135	36-149	11	0-25	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



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LCS/LCSD - Surrogate

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0415
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
099-12-529-857	LCS	Aqueous	GC 44	12/08/15	12/09/15 16:08	151208L12	
099-12-529-857	LCSD	Aqueous	GC 44	12/08/15	12/09/15 16:22	151208L12	
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	0.01000	0.7710	77	0.7992	80	50-135	
2,4,5,6-Tetrachloro-m-Xylene	0.01000	0.7516	75	0.7811	78	50-135	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0415
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-704-5	LCS	Aqueous	GC 44	12/08/15	12/09/15 16:37	151208L11
099-16-704-5	LCSD	Aqueous	GC 44	12/08/15	12/09/15 16:51	151208L11

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	33.35	24.04	72	24.05	72	50-150	33-167	0	0-25	
4,4'-DDD	33.35	24.99	75	24.85	75	50-150	33-167	1	0-25	
4,4'-DDE	33.35	25.84	77	25.73	77	50-150	33-167	0	0-25	
4,4'-DDT	33.35	26.12	78	26.01	78	50-150	33-167	0	0-25	
Alpha Chlordane	33.35	25.00	75	24.91	75	50-150	33-167	0	0-25	
Dieldrin	33.35	25.93	78	26.09	78	50-150	33-167	1	0-25	
Gamma Chlordane	33.35	24.55	74	24.48	73	50-150	33-167	0	0-25	
Endrin	33.35	21.61	65	21.22	64	50-150	33-167	2	0-25	
Gamma-BHC	33.35	23.66	71	23.77	71	50-150	33-167	0	0-25	
Heptachlor	33.35	24.55	74	24.60	74	50-150	33-167	0	0-25	
Heptachlor Epoxide	33.35	24.47	73	24.45	73	50-150	33-167	0	0-25	

Total number of LCS compounds: 11

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

LCS/LCSD - Surrogate

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 12/05/15
Work Order: 15-12-0415
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
099-16-704-5	LCS	Aqueous	GC 44	12/08/15	12/09/15 16:37	151208L11	
099-16-704-5	LCSD	Aqueous	GC 44	12/08/15	12/09/15 16:51	151208L11	
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	Qualifiers
Decachlorobiphenyl	66.70	74.56	75	74.02	74	50-150	
2,4,5,6-Tetrachloro-m-Xylene	66.70	75.25	75	76.51	77	50-150	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Sample Analysis Summary Report

Work Order: 15-12-0415

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<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8081A	EPA 3510C	960	GC 44	1


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Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 15-12-0415

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

INSTRUCTIONS FOR LAB PERSONNEL:

GeoTracker EDF required? ☐ Yes ☒ No
 Equals 4-file EDWEDD required? ☒ Yes ☐ No
 Specify analytic/prep method and detection limit in report.
 Notify us of any anomalous peaks in GC or other scans.
 Call immediately with any questions or problems.

INSTRUCTIONS FOR LAB PERSONNEL:

● = Samples received from a secured, locked area

INSTRUCTIONS FOR LAB PERSONNEL:

GeoTracker EDF required? ☐ Yes ☒ No

Equis 4-file EDWEDD required? ☒ Yes ☐ No

Specify analytic/prep method and detection limit in report.

Notify us of any anomalous peaks in GC or other scans.

Call immediately with any questions or problems.

Please send analytic results, electronic deliverables and the original chain-of-custody form to:

labresults@weiss.com
 ajm@weiss.com
 sab@weiss.com

CalSciene Environmental Lab
5063 Commercial Circle, Suite H
Concord, CA 94520
phone: 925-689-9022

INSTRUCTIONS FOR LAB PERSONNEL:

GeoTracker EDF required? ☐ Yes ☒ No
 Equis 4-file EDWEDD required? ☒ Yes ☐ No

Specify analytic/prep method and detection limit in report.
 Notify us of any anomalous peaks in GC or other scans.
 Call immediately with any questions or problems.

15-12-0415

[illegible]

● = Samples received from a secured, locked area

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Weiss

DATE: 12/05/2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2 (CF:-0.4°C); Temperature (w/o CF): 2.9°C (w/ CF): 2.5°C; ☒ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by:)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: Sur

CUSTODY SEAL:

Cooler ☒ Present and Intact

☐ Present but Not Intact

☐ Not Present

☐ N/A

Checked by: Sur

Sample(s) ☐ Present and Intact

☐ Present but Not Intact

☒ Not Present

☐ N/A

Checked by: 1050

SAMPLE CONDITION:

Chain-of-Custody (COC) document(s) received with samples ☒ Yes ☐ No ☐ N/A

COC document(s) received complete ☒ Yes ☐ No ☐ N/A

☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers

☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time

Sampler's name indicated on COC ☒ Yes ☐ No ☐ N/A

Sample container label(s) consistent with COC ☒ Yes ☐ No ☐ N/A

Sample container(s) intact and in good condition ☒ Yes ☐ No ☐ N/A

Proper containers for analyses requested ☒ Yes ☐ No ☐ N/A

Sufficient volume/mass for analyses requested ☒ Yes ☐ No ☐ N/A

Samples received within holding time ☒ Yes ☐ No ☐ N/A

Aqueous samples for certain analyses received within 15-minute holding time

☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen ☐ Yes ☐ No ☒ N/A

Proper preservation chemical(s) noted on COC and/or sample container ☒ Yes ☐ No ☐ N/A

Unpreserved aqueous sample(s) received for certain analyses

☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals

Container(s) for certain analysis free of headspace ☐ Yes ☐ No ☒ N/A

☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)

☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation ☐ Yes ☐ No ☒ N/A

CONTAINER TYPE:

(Trip Blank Lot Number:)

Aqueous: ☐ VOA ☐ VOA_h ☐ VOA_{na2} ☐ 100PJ ☐ 100PJ_{na2} ☐ 125AGB ☐ 125AGB_h ☐ 125AGB_p ☐ 125PB

☐ 125PB_{znna} ☐ 250AGB ☐ 250CGB ☐ 250CGB_s ☐ 250PB ☐ 250PB_n ☐ 500AGB ☐ 500AGJ ☐ 500AGJ_s
☐ 500PB ☒ 1AGB ☐ 1AGB_{na2} ☐ 1AGB_s ☐ 1PB ☐ 1PB_{na} ☐ ☐ ☐ ☐

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve () ☐ EnCores® () ☐ TerraCores® () ☐

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ Other Matrix (): ☐ ☐

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1050

s = H₂SO₄, u = ultra-pure, znna = Zn(CH₃CO₂)₂ + NaOH

Reviewed by: 1017

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925)484-1919

TestAmerica Job ID: 720-68997-1

Client Project/Site: LRT 2015-2016 Annual StormWater
Sampling

For:

Weiss Associates

2200 Powell Street

Suite 925

Emeryville, California 94608

Attn: Mr. Scott Bourne



Authorized for release by:

12/18/2015 12:04:57 PM

Micah Smith, Project Manager II

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Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-68997-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-68997-1

Job ID: 720-68997-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative 720-68997-1

Comments

No additional comments.

Receipt

The samples were received on 12/4/2015 12:17 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.5° C and 2.6° C.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method(s) 1664A: Analysis for Hexane Extractable Material (HEM) was performed for the following samples: TS1-I-2015-2 (720-68997-1) and TS2-I-2015-2 (720-68997-2). Since the HEM result(s) was below the reporting limit (RL), the result(s) for Silica Gel Treated - Hexane Extractable Material (SGT-HEM) was reported as a non-detect. All HEM quality control criteria were met.

Method(s) 1664A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-299712 and analytical batch 440-299762. The laboratory control (LCS) was performed in duplicate to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-68997-1

Client Sample ID: TS1-I-2015-2

Lab Sample ID: 720-68997-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	3.7		0.10	0.10	mg/L	1			200.8	Total/NA
Copper	0.14		0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	12	B	0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.027		0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	1.7		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	1.6		0.0070	0.0019	mg/L	1			200.8	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
Total Suspended Solids	180		10	10	mg/L	1			SM 2540D	Total/NA
pH	9.71	HF	0.100	0.100	SU	1			SM 4500 H+ B	Total/NA

Client Sample ID: TS2-I-2015-2

Lab Sample ID: 720-68997-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	1.0		0.10	0.10	mg/L	1			200.8	Total/NA
Copper	0.025		0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	2.8	B	0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.0084		0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.15		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.38		0.0070	0.0019	mg/L	1			200.8	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
Total Suspended Solids	170		10	10	mg/L	1			SM 2540D	Total/NA
pH	7.62	HF	0.100	0.100	SU	1			SM 4500 H+ B	Total/NA

Client Sample ID: TS2-M-2015-2

Lab Sample ID: 720-68997-3

Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
Total Suspended Solids	87		4.0	4.0	mg/L	1			SM 2540D	Total/NA

Client Sample ID: TS1-M-2015-2

Lab Sample ID: 720-68997-4

Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
Total Suspended Solids	190		10	10	mg/L	1			SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-68997-1

Client Sample ID: TS1-I-2015-2

Date Collected: 12/03/15 16:10

Date Received: 12/04/15 12:17

Lab Sample ID: 720-68997-1

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	3.7		0.10	0.10	mg/L		12/08/15 15:04	12/09/15 17:51	1
Copper	0.14		0.0020	0.00060	mg/L		12/08/15 15:04	12/09/15 17:51	1
Iron	12	B	0.040	0.0058	mg/L		12/08/15 15:04	12/09/15 17:51	1
Nickel	0.027		0.0030	0.00040	mg/L		12/08/15 15:04	12/09/15 17:51	1
Lead	1.7		0.00040	0.000034	mg/L		12/08/15 15:04	12/09/15 17:51	1
Zinc	1.6		0.0070	0.0019	mg/L		12/08/15 15:04	12/09/15 17:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	<1.5		5.3	1.5	mg/L		12/11/15 07:02	12/11/15 10:13	1
SGT-HEM	<1.5		5.3	1.5	mg/L		12/11/15 07:02	12/11/15 10:13	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	180		10	10	mg/L			12/07/15 20:46	1
pH	9.71	HF	0.100	0.100	SU			12/04/15 14:53	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-68997-1

Client Sample ID: TS2-I-2015-2

Date Collected: 12/03/15 15:15

Date Received: 12/04/15 12:17

Lab Sample ID: 720-68997-2

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.0		0.10	0.10	mg/L		12/08/15 15:04	12/09/15 17:55	1
Copper	0.025		0.0020	0.00060	mg/L		12/08/15 15:04	12/09/15 17:55	1
Iron	2.8	B	0.040	0.0058	mg/L		12/08/15 15:04	12/09/15 17:55	1
Nickel	0.0084		0.0030	0.00040	mg/L		12/08/15 15:04	12/09/15 17:55	1
Lead	0.15		0.00040	0.000034	mg/L		12/08/15 15:04	12/09/15 17:55	1
Zinc	0.38		0.0070	0.0019	mg/L		12/08/15 15:04	12/09/15 17:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	<1.5		5.2	1.5	mg/L		12/11/15 07:02	12/11/15 09:13	1
SGT-HEM	<1.5		5.2	1.5	mg/L		12/11/15 07:02	12/11/15 09:13	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	170		10	10	mg/L			12/07/15 20:46	1
pH	7.62	HF	0.100	0.100	SU			12/04/15 15:00	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates

TestAmerica Job ID: 720-68997-1

Project/Site: LRT 2015-2016 Annual StormWater Sampling

Client Sample ID: TS2-M-2015-2

Lab Sample ID: 720-68997-3

Date Collected: 12/03/15 15:45

Matrix: Water

Date Received: 12/04/15 12:17

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	87		4.0	4.0	mg/L	-		12/07/15 20:46	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-68997-1

Client Sample ID: TS1-M-2015-2

Date Collected: 12/03/15 16:20

Date Received: 12/04/15 12:17

Lab Sample ID: 720-68997-4

Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	190		10	10	mg/L			12/07/15 20:46	1

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-68997-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-207361/14-A

Matrix: Water

Analysis Batch: 207526

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 207361

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		12/08/15 15:04	12/09/15 17:01	1
Copper	<0.00060		0.0020	0.00060	mg/L		12/08/15 15:04	12/09/15 17:01	1
Iron	0.0126	J	0.040	0.0058	mg/L		12/08/15 15:04	12/09/15 17:01	1
Nickel	<0.00040		0.0030	0.00040	mg/L		12/08/15 15:04	12/09/15 17:01	1
Lead	<0.000034		0.00040	0.000034	mg/L		12/08/15 15:04	12/09/15 17:01	1
Zinc	<0.0019		0.0070	0.0019	mg/L		12/08/15 15:04	12/09/15 17:01	1

Lab Sample ID: LCS 580-207361/15-A

Matrix: Water

Analysis Batch: 207526

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 207361

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	1.00	1.00		mg/L		100	85 - 115
Copper	0.100	0.0967		mg/L		97	85 - 115
Iron	10.0	9.79		mg/L		98	85 - 115
Nickel	0.100	0.0977		mg/L		98	85 - 115
Lead	0.100	0.0981		mg/L		98	85 - 115
Zinc	0.100	0.0974		mg/L		97	85 - 115

Lab Sample ID: LCSD 580-207361/16-A

Matrix: Water

Analysis Batch: 207526

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 207361

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	1.00	1.06		mg/L		106	85 - 115	5	20
Copper	0.100	0.102		mg/L		102	85 - 115	5	20
Iron	10.0	10.4		mg/L		104	85 - 115	6	20
Nickel	0.100	0.102		mg/L		102	85 - 115	5	20
Lead	0.100	0.106		mg/L		106	85 - 115	8	20
Zinc	0.100	0.102		mg/L		102	85 - 115	4	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 440-299712/1-A

Matrix: Water

Analysis Batch: 299762

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 299712

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	<1.4		5.0	1.4	mg/L		12/11/15 07:02	12/11/15 10:13	1

Lab Sample ID: LCS 440-299712/2-A

Matrix: Water

Analysis Batch: 299762

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 299712

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	34.8		mg/L		87	78 - 114

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-68997-1

Method: 1664A - HEM and SGT-HEM (Continued)

Lab Sample ID: LCSD 440-299712/3-A

Matrix: Water

Analysis Batch: 299762

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 299712

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM	40.0	34.9		mg/L		87	78 - 114	0	11

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 720-193742/3

Matrix: Water

Analysis Batch: 193742

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.0		1.0	1.0	mg/L			12/07/15 20:46	1

Lab Sample ID: LCS 720-193742/1

Matrix: Water

Analysis Batch: 193742

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	500	360		mg/L		72	69 - 117		

Lab Sample ID: LCSD 720-193742/2

Matrix: Water

Analysis Batch: 193742

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	500	396		mg/L		79	69 - 117	10	20

Lab Sample ID: 720-68997-4 DU

Matrix: Water

Analysis Batch: 193742

Client Sample ID: TS1-M-2015-2

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	190		192		mg/L		1	10

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 720-193633/1

Matrix: Water

Analysis Batch: 193633

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
pH	7.00	6.930		SU		99	99 - 101		

Lab Sample ID: 720-68997-1 DU

Matrix: Water

Analysis Batch: 193633

Client Sample ID: TS1-I-2015-2

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	9.71	HF	9.670		SU		0.4	5

TestAmerica Pleasanton

QC Association Summary

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-68997-1

Metals

Prep Batch: 207361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68997-1	TS1-I-2015-2	Total/NA	Water	200.8	
720-68997-2	TS2-I-2015-2	Total/NA	Water	200.8	
LCS 580-207361/15-A	Lab Control Sample	Total/NA	Water	200.8	
LCSD 580-207361/16-A	Lab Control Sample Dup	Total/NA	Water	200.8	
MB 580-207361/14-A	Method Blank	Total/NA	Water	200.8	

Analysis Batch: 207526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68997-1	TS1-I-2015-2	Total/NA	Water	200.8	207361
720-68997-2	TS2-I-2015-2	Total/NA	Water	200.8	207361
LCS 580-207361/15-A	Lab Control Sample	Total/NA	Water	200.8	207361
LCSD 580-207361/16-A	Lab Control Sample Dup	Total/NA	Water	200.8	207361
MB 580-207361/14-A	Method Blank	Total/NA	Water	200.8	207361

General Chemistry

Analysis Batch: 193633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68997-1	TS1-I-2015-2	Total/NA	Water	SM 4500 H+ B	
720-68997-1 DU	TS1-I-2015-2	Total/NA	Water	SM 4500 H+ B	
720-68997-2	TS2-I-2015-2	Total/NA	Water	SM 4500 H+ B	
LCS 720-193633/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 193742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68997-1	TS1-I-2015-2	Total/NA	Water	SM 2540D	
720-68997-2	TS2-I-2015-2	Total/NA	Water	SM 2540D	
720-68997-3	TS2-M-2015-2	Total/NA	Water	SM 2540D	
720-68997-4	TS1-M-2015-2	Total/NA	Water	SM 2540D	
720-68997-4 DU	TS1-M-2015-2	Total/NA	Water	SM 2540D	
LCS 720-193742/1	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 720-193742/2	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
MB 720-193742/3	Method Blank	Total/NA	Water	SM 2540D	

Prep Batch: 299712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68997-1	TS1-I-2015-2	Total/NA	Water	1664A	
720-68997-2	TS2-I-2015-2	Total/NA	Water	1664A	
LCS 440-299712/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 440-299712/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 440-299712/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 299762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68997-1	TS1-I-2015-2	Total/NA	Water	1664A	299712
720-68997-2	TS2-I-2015-2	Total/NA	Water	1664A	299712
LCS 440-299712/2-A	Lab Control Sample	Total/NA	Water	1664A	299712
LCSD 440-299712/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	299712
MB 440-299712/1-A	Method Blank	Total/NA	Water	1664A	299712

TestAmerica Pleasanton

Lab Chronicle

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-68997-1

Client Sample ID: TS1-I-2015-2

Date Collected: 12/03/15 16:10

Date Received: 12/04/15 12:17

Lab Sample ID: 720-68997-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			207361	12/08/15 15:04	MKN	TAL SEA
Total/NA	Analysis	200.8		1	207526	12/09/15 17:51	FCW	TAL SEA
Total/NA	Prep	1664A			299712	12/11/15 07:02	L1A	TAL IRV
Total/NA	Analysis	1664A		1	299762	12/11/15 10:13	LEG	TAL IRV
Total/NA	Analysis	SM 2540D		1	193742	12/07/15 20:46	EYT	TAL PLS
Total/NA	Analysis	SM 4500 H+ B		1	193633	12/04/15 14:53	EYT	TAL PLS

Client Sample ID: TS2-I-2015-2

Date Collected: 12/03/15 15:15

Date Received: 12/04/15 12:17

Lab Sample ID: 720-68997-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			207361	12/08/15 15:04	MKN	TAL SEA
Total/NA	Analysis	200.8		1	207526	12/09/15 17:55	FCW	TAL SEA
Total/NA	Prep	1664A			299712	12/11/15 07:02	L1A	TAL IRV
Total/NA	Analysis	1664A		1	299762	12/11/15 09:13	LEG	TAL IRV
Total/NA	Analysis	SM 2540D		1	193742	12/07/15 20:46	EYT	TAL PLS
Total/NA	Analysis	SM 4500 H+ B		1	193633	12/04/15 15:00	EYT	TAL PLS

Client Sample ID: TS2-M-2015-2

Date Collected: 12/03/15 15:45

Date Received: 12/04/15 12:17

Lab Sample ID: 720-68997-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	193742	12/07/15 20:46	EYT	TAL PLS

Client Sample ID: TS1-M-2015-2

Date Collected: 12/03/15 16:20

Date Received: 12/04/15 12:17

Lab Sample ID: 720-68997-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	193742	12/07/15 20:46	EYT	TAL PLS

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Pleasanton

Certification Summary

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-68997-1

Laboratory: TestAmerica Pleasanton

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16 *

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2706	06-30-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
1664A	1664A	Water	SGT-HEM

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

* Certification renewal pending - certification considered valid.

TestAmerica Pleasanton

Method Summary

Client: Weiss Associates

TestAmerica Job ID: 720-68997-1

Project/Site: LRT 2015-2016 Annual StormWater Sampling

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	TAL SEA
1664A	HEM and SGT-HEM	1664A	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL PLS
SM 4500 H+ B	pH	SM	TAL PLS

Protocol References:

1664A = EPA-821-98-002

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater",

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Weiss Associates

TestAmerica Job ID: 720-68997-1

Project/Site: LRT 2015-2016 Annual StormWater Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-68997-1	TS1-I-2015-2	Water	12/03/15 16:10	12/04/15 12:17
720-68997-2	TS2-I-2015-2	Water	12/03/15 15:15	12/04/15 12:17
720-68997-3	TS2-M-2015-2	Water	12/03/15 15:45	12/04/15 12:17
720-68997-4	TS1-M-2015-2	Water	12/03/15 16:20	12/04/15 12:17

TestAmerica Pleasanton

Chain of Custody Record

720-688497

165377

TestAmerica
1220 Quarry Lane
Pleasanton, CA 94566
Phone: 925-484-1919 ext 137

Please send analytic results, electronic deliverables and the original chain-of-custody form to:
labresults@weiss.com
ajm@weiss.com
sab@weiss.com

INSTRUCTIONS FOR LAB PERSONNEL:
GeoTracker EDF required? ☐ Yes ☒ No
Equis 4-file EDF(EDD) required? ☒ Yes ☐ No
Specify analytic/prep method and detection limit in report
Notify us of any anomalous peaks in QC or other scans.
Call immediately with any questions or problems

Client Contact

Project Manager: Scott Bourne

Protocol ID path:

JLevin.Richmond.W3b_Sampling

COC Number:

Weiss Associates

Project ID: 426-2026.01 Task 1.1.3

2200 Powell Street Suite 925

Sampled by: BPB/AJM

Emeryville, CA 94608

Sample date(s): 12/3/2015

(510) 450-6000

Phone

Analysis Turnaround Time:

(510) 547-5043

FAX

Job Name: LRT 2015-2016 Annual Storm Water Sampling

Address: 402 Wright Avenue, Richmond, CA 94804

(Specify Days or Hours)

Lab ID:

Sample Identification

Sample Date

Sample Time

Sample Matrix

of Cont.

Analyte (Method ID):

pH (BPA 9040B)

Total Suspended Solids (SM 2540D)

Oil & Grease (BPA 1664A SGT-HEM)

Total Metals- Al, Cu, Fe, Ni, Pb, Zn (BPA 200 8 ICP-MS)

TS1-E-2015-2	12/3/15	1610	W	5	X	X	X	X											
TS2-E-2015-2		1515		5	X	X	X	X											
TS2-H-2015-2		1545		1	X	X	X	X											
TS1-H-2015-2		1620		1	X	X	X	X											

720-68897 Chain of Custody



Preservation Used: 1=Ice, 2=HCl, 3=H₂SO₄, 4=HNO₃, 5=NaOH, 6=Other

Special Instructions/OC Requirements & Comments: Level II Report. Report with reporting limit and method detection limit. Analyze and report only the metals listed above (Al, Cu, Fe, Ni, Pb, and Zn).

Relinquished by: <i>[Signature]</i>	Company: Weiss	Date/Time: 12/3/15 1400	Received by: <i>PRDGE</i>	Company: Weiss	Date/Time: 12/3/15 1400
Relinquished by: <i>[Signature]</i>	Company: Weiss	Date/Time: 12/3/15 0900	Received by: <i>Victor Romo</i>	Company: TA	Date/Time: 12/4/15 940
Relinquished by: <i>[Signature]</i>	Company: RA	Date/Time: 12/4/15 1211	Received by: <i>Don Hudson</i>	Company: <i>[Signature]</i>	Date/Time: 12-4-15 1217

☒ = Samples released to a secured, locked area.

• = Samples received from a secured, locked area

TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Phone (925) 484-1919 Fax (925) 600-3002

Chain of Custody Record



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:	Lab P/N:	Carrier Tracking No(s):	COC No:
Client Contact: Shipping/Receiving		Phone:	Smith, Micah		720-26847.1
Company:		E-Mail:	(micah.smith@testamericainc.com)		Page: 1 of 1
TestAmerica Laboratories, Inc					Job #: 720-68997-1
Address: 17461 Derian Ave., Suite 100, City: Irvine State, Zip: CA, 92614-5817 Phone: 949-261-1022(Tel) 949-260-3297(Fax) Email:		Due Date Requested: 12/11/2015 TAT Requested (days): PO #: WO #: Project #: 72009078 SSOW#:	Analysis Requested		
Project Name: LRTC Stormwater Site:		Field Filtered Sample (Yes or No)	1664A/1664A_P_W (MOD) HEM and SGT-HEM	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - other (specify) Other:	
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, G=soil, O=organic)
TS1+2015-2 (720-68997-1)		12/3/15	16:10 Pacific		Water
TS2+2015-2 (720-68997-2)		12/3/15	15:15 Pacific		Water
Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Empty Kit Relinquished by:		Date:	Method of Shipment:		
Relinquished by:		Date/Time:	Received by:		
Relinquished by:		Date/Time:	Received by:		
Relinquished by:		Date/Time:	Received by:		
Custody Seal Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		Custody Seal No.: #6518-8276-9652		Cooler Temperature(s) °C and Other Remarks: 12-8/15 9.55 1.8/2.7 18.77	

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

2. Once the problem is identified, the next step is to define the objectives and goals of the project. This helps to clarify what needs to be achieved and provides a clear direction for the team.

3. The third step is to develop a plan or strategy to address the problem. This involves breaking down the problem into smaller, manageable tasks and determining the resources needed to complete each task.

4. The fourth step is to implement the plan. This involves putting the strategy into action and monitoring progress regularly to ensure that the project is on track.

5. The final step is to evaluate the results of the project. This involves comparing the actual outcomes with the objectives and goals to determine the effectiveness of the project and identify areas for improvement.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Page 19 of 22

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-68997-1

Login Number: 68997

List Number: 1

Creator: Arauz, Dennis

List Source: TestAmerica Pleasanton

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-68997-1

Login Number: 68997

List Number: 2

Creator: Ornelas, Olga

List Source: TestAmerica Irvine

List Creation: 12/08/15 01:01 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-68997-1

Login Number: 68997

List Number: 3

Creator: Vance, Diane R

List Source: TestAmerica Seattle

List Creation: 12/08/15 02:35 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925)484-1919

TestAmerica Job ID: 720-68998-1

Client Project/Site: LRTC Stormwater

For:

Weiss Associates

2200 Powell Street

Suite 925

Emeryville, California 94608

Attn: Mr. Scott Bourne



Authorized for release by:

12/15/2015 5:37:49 PM

Micah Smith, Project Manager II

(925)484-1919

micah.smith@testamericainc.com

LINKS

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results through

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Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68998-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68998-1

Job ID: 720-68998-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative 720-68998-1

Comments

No additional comments.

Receipt

The samples were received on 12/4/2015 12:17 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.5° C and 2.6° C.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method(s) SM 4500 H+ B: The following samples were reported without a closing CCV because the data file was lost and could not be recovered: TS1-E-2015-2 (720-68998-1), TS2-E-2015-2 (720-68998-2) and FD-2015-2 (720-68998-3)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method(s) 1664A: Analysis for Hexane Extractable Material (HEM) was performed for the following samples: TS1-E-2015-2 (720-68998-1), TS2-E-2015-2 (720-68998-2) and FD-2015-2 (720-68998-3). Since the HEM result(s) was below the reporting limit (RL), the result(s) for Silica Gel Treated - Hexane Extractable Material (SGT-HEM) was reported as a non-detect. All HEM quality control criteria were met.

Method(s) 1664A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-299712 and analytical batch 440-299762. The laboratory control (LCS) was performed in duplicate to provide precision data for this batch.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68998-1

Client Sample ID: TS1-E-2015-2

Lab Sample ID: 720-68998-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	0.24		0.10	0.10	mg/L	1			200.8	Total/NA
Copper	0.013		0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	0.67	B	0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.0030		0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.12		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.13		0.0070	0.0019	mg/L	1			200.8	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
Total Suspended Solids	19		2.9	2.9	mg/L	1			SM 2540D	Total/NA
pH	7.99	HF	0.100	0.100	SU	1			SM 4500 H+ B	Total/NA

Client Sample ID: TS2-E-2015-2

Lab Sample ID: 720-68998-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Copper	0.0047		0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	0.038	J B	0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.0021	J	0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.0014		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.12		0.0070	0.0019	mg/L	1			200.8	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
Total Suspended Solids	1.1		1.0	1.0	mg/L	1			SM 2540D	Total/NA
pH	7.78	HF	0.100	0.100	SU	1			SM 4500 H+ B	Total/NA

Client Sample ID: FD-2015-2

Lab Sample ID: 720-68998-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Copper	0.0046		0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	0.039	J B	0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.0021	J	0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.0014		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.12		0.0070	0.0019	mg/L	1			200.8	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	7.79	HF	0.100	0.100	SU	1			SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68998-1

Client Sample ID: TS1-E-2015-2

Date Collected: 12/03/15 16:15

Date Received: 12/04/15 12:17

Lab Sample ID: 720-68998-1

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.24		0.10	0.10	mg/L		12/08/15 15:04	12/09/15 18:00	1
Copper	0.013		0.0020	0.00060	mg/L		12/08/15 15:04	12/09/15 18:00	1
Iron	0.67	B	0.040	0.0058	mg/L		12/08/15 15:04	12/09/15 18:00	1
Nickel	0.0030		0.0030	0.00040	mg/L		12/08/15 15:04	12/09/15 18:00	1
Lead	0.12		0.00040	0.000034	mg/L		12/08/15 15:04	12/09/15 18:00	1
Zinc	0.13		0.0070	0.0019	mg/L		12/08/15 15:04	12/09/15 18:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	<1.4		5.2	1.4	mg/L		12/11/15 07:02	12/11/15 10:13	1
SGT-HEM	<1.4		5.2	1.4	mg/L		12/11/15 07:02	12/11/15 10:13	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	19		2.9	2.9	mg/L			12/07/15 20:46	1
pH	7.99	HF	0.100	0.100	SU			12/04/15 13:57	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68998-1

Client Sample ID: TS2-E-2015-2

Date Collected: 12/03/15 15:35

Date Received: 12/04/15 12:17

Lab Sample ID: 720-68998-2

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		12/08/15 15:04	12/09/15 17:10	1
Copper	0.0047		0.0020	0.00060	mg/L		12/08/15 15:04	12/09/15 17:10	1
Iron	0.038	J B	0.040	0.0058	mg/L		12/08/15 15:04	12/09/15 17:10	1
Nickel	0.0021	J	0.0030	0.00040	mg/L		12/08/15 15:04	12/09/15 17:10	1
Lead	0.0014		0.00040	0.000034	mg/L		12/08/15 15:04	12/09/15 17:10	1
Zinc	0.12		0.0070	0.0019	mg/L		12/08/15 15:04	12/09/15 17:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	<1.5		5.4	1.5	mg/L		12/11/15 07:02	12/11/15 10:13	1
SGT-HEM	<1.5		5.4	1.5	mg/L		12/11/15 07:02	12/11/15 10:13	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	1.1		1.0	1.0	mg/L			12/07/15 20:46	1
pH	7.78	HF	0.100	0.100	SU			12/04/15 14:08	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68998-1

Client Sample ID: FD-2015-2

Date Collected: 12/03/15 15:40

Date Received: 12/04/15 12:17

Lab Sample ID: 720-68998-3

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		12/08/15 15:04	12/09/15 18:05	1
Copper	0.0046		0.0020	0.00060	mg/L		12/08/15 15:04	12/09/15 18:05	1
Iron	0.039	J B	0.040	0.0058	mg/L		12/08/15 15:04	12/09/15 18:05	1
Nickel	0.0021	J	0.0030	0.00040	mg/L		12/08/15 15:04	12/09/15 18:05	1
Lead	0.0014		0.00040	0.000034	mg/L		12/08/15 15:04	12/09/15 18:05	1
Zinc	0.12		0.0070	0.0019	mg/L		12/08/15 15:04	12/09/15 18:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	<1.5		5.3	1.5	mg/L		12/11/15 07:02	12/11/15 10:13	1
SGT-HEM	<1.5		5.3	1.5	mg/L		12/11/15 07:02	12/11/15 10:13	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.0		1.0	1.0	mg/L			12/07/15 20:46	1
pH	7.79	HF	0.100	0.100	SU			12/04/15 14:16	1

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68998-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-207361/14-A

Matrix: Water

Analysis Batch: 207526

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 207361

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		12/08/15 15:04	12/09/15 17:01	1
Copper	<0.00060		0.0020	0.00060	mg/L		12/08/15 15:04	12/09/15 17:01	1
Iron	0.0126	J	0.040	0.0058	mg/L		12/08/15 15:04	12/09/15 17:01	1
Nickel	<0.00040		0.0030	0.00040	mg/L		12/08/15 15:04	12/09/15 17:01	1
Lead	<0.000034		0.00040	0.000034	mg/L		12/08/15 15:04	12/09/15 17:01	1
Zinc	<0.0019		0.0070	0.0019	mg/L		12/08/15 15:04	12/09/15 17:01	1

Lab Sample ID: LCS 580-207361/15-A

Matrix: Water

Analysis Batch: 207526

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 207361

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	1.00	1.00		mg/L		100	85 - 115
Copper	0.100	0.0967		mg/L		97	85 - 115
Iron	10.0	9.79		mg/L		98	85 - 115
Nickel	0.100	0.0977		mg/L		98	85 - 115
Lead	0.100	0.0981		mg/L		98	85 - 115
Zinc	0.100	0.0974		mg/L		97	85 - 115

Lab Sample ID: LCSD 580-207361/16-A

Matrix: Water

Analysis Batch: 207526

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 207361

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	1.00	1.06		mg/L		106	85 - 115	5	20
Copper	0.100	0.102		mg/L		102	85 - 115	5	20
Iron	10.0	10.4		mg/L		104	85 - 115	6	20
Nickel	0.100	0.102		mg/L		102	85 - 115	5	20
Lead	0.100	0.106		mg/L		106	85 - 115	8	20
Zinc	0.100	0.102		mg/L		102	85 - 115	4	20

Lab Sample ID: 720-68998-2 MS

Matrix: Water

Analysis Batch: 207526

Client Sample ID: TS2-E-2015-2

Prep Type: Total/NA

Prep Batch: 207361

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	<0.10		1.00	1.04		mg/L		104	70 - 130
Copper	0.0047		0.100	0.0971		mg/L		92	70 - 130
Iron	0.038	J B	10.0	9.39		mg/L		93	70 - 130
Nickel	0.0021	J	0.100	0.0977		mg/L		96	70 - 130
Lead	0.0014		0.100	0.0896		mg/L		88	70 - 130
Zinc	0.12		0.100	0.207		mg/L		88	70 - 130

Lab Sample ID: 720-68998-2 MSD

Matrix: Water

Analysis Batch: 207526

Client Sample ID: TS2-E-2015-2

Prep Type: Total/NA

Prep Batch: 207361

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	<0.10		1.00	1.00		mg/L		100	70 - 130	4	20

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68998-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 720-68998-2 MSD

Matrix: Water

Analysis Batch: 207526

Client Sample ID: TS2-E-2015-2

Prep Type: Total/NA

Prep Batch: 207361

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Copper	0.0047		0.100	0.0944		mg/L		90	70 - 130	3	20
Iron	0.038	J B	10.0	9.09		mg/L		90	70 - 130	3	20
Nickel	0.0021	J	0.100	0.0949		mg/L		93	70 - 130	3	20
Lead	0.0014		0.100	0.0882		mg/L		87	70 - 130	2	20
Zinc	0.12		0.100	0.201		mg/L		82	70 - 130	3	20

Lab Sample ID: 720-68998-2 DU

Matrix: Water

Analysis Batch: 207526

Client Sample ID: TS2-E-2015-2

Prep Type: Total/NA

Prep Batch: 207361

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Aluminum	<0.10		<0.10		mg/L		NC	20
Copper	0.0047		0.00478		mg/L		1	20
Iron	0.038	J B	0.0348	J	mg/L		10	20
Nickel	0.0021	J	0.00208	J	mg/L		0.4	20
Lead	0.0014		0.00145		mg/L		1	20
Zinc	0.12		0.118		mg/L		0.4	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 440-299712/1-A

Matrix: Water

Analysis Batch: 299762

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 299712

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	<1.4		5.0	1.4	mg/L		12/11/15 07:02	12/11/15 10:13	1

Lab Sample ID: LCS 440-299712/2-A

Matrix: Water

Analysis Batch: 299762

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 299712

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	34.8		mg/L		87	78 - 114

Lab Sample ID: LCSD 440-299712/3-A

Matrix: Water

Analysis Batch: 299762

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 299712

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HEM	40.0	34.9		mg/L		87	78 - 114	0	11

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 720-193742/3

Matrix: Water

Analysis Batch: 193742

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.0		1.0	1.0	mg/L			12/07/15 20:46	1

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68998-1

Lab Sample ID: LCS 720-193742/1
Matrix: Water
Analysis Batch: 193742

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	500	360		mg/L		72	69 - 117

Lab Sample ID: LCSD 720-193742/2
Matrix: Water
Analysis Batch: 193742

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	500	396		mg/L		79	69 - 117	10	20

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 720-193675/1
Matrix: Water
Analysis Batch: 193675

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	6.980		SU		100	99 - 101

Lab Sample ID: 720-68998-1 DU
Matrix: Water
Analysis Batch: 193675

Client Sample ID: TS1-E-2015-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.99	HF	7.980		SU		0.1	5

TestAmerica Pleasanton

QC Association Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68998-1

Metals

Prep Batch: 207361

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68998-1	TS1-E-2015-2	Total/NA	Water	200.8	
720-68998-2	TS2-E-2015-2	Total/NA	Water	200.8	
720-68998-2 DU	TS2-E-2015-2	Total/NA	Water	200.8	
720-68998-2 MS	TS2-E-2015-2	Total/NA	Water	200.8	
720-68998-2 MSD	TS2-E-2015-2	Total/NA	Water	200.8	
720-68998-3	FD-2015-2	Total/NA	Water	200.8	
LCS 580-207361/15-A	Lab Control Sample	Total/NA	Water	200.8	
LCSD 580-207361/16-A	Lab Control Sample Dup	Total/NA	Water	200.8	
MB 580-207361/14-A	Method Blank	Total/NA	Water	200.8	

Analysis Batch: 207526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68998-1	TS1-E-2015-2	Total/NA	Water	200.8	207361
720-68998-2	TS2-E-2015-2	Total/NA	Water	200.8	207361
720-68998-2 DU	TS2-E-2015-2	Total/NA	Water	200.8	207361
720-68998-2 MS	TS2-E-2015-2	Total/NA	Water	200.8	207361
720-68998-2 MSD	TS2-E-2015-2	Total/NA	Water	200.8	207361
720-68998-3	FD-2015-2	Total/NA	Water	200.8	207361
LCS 580-207361/15-A	Lab Control Sample	Total/NA	Water	200.8	207361
LCSD 580-207361/16-A	Lab Control Sample Dup	Total/NA	Water	200.8	207361
MB 580-207361/14-A	Method Blank	Total/NA	Water	200.8	207361

General Chemistry

Analysis Batch: 193675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68998-1	TS1-E-2015-2	Total/NA	Water	SM 4500 H+ B	
720-68998-1 DU	TS1-E-2015-2	Total/NA	Water	SM 4500 H+ B	
720-68998-2	TS2-E-2015-2	Total/NA	Water	SM 4500 H+ B	
720-68998-3	FD-2015-2	Total/NA	Water	SM 4500 H+ B	
LCS 720-193675/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 193742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68998-1	TS1-E-2015-2	Total/NA	Water	SM 2540D	
720-68998-2	TS2-E-2015-2	Total/NA	Water	SM 2540D	
720-68998-3	FD-2015-2	Total/NA	Water	SM 2540D	
LCS 720-193742/1	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 720-193742/2	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
MB 720-193742/3	Method Blank	Total/NA	Water	SM 2540D	

Prep Batch: 299712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68998-1	TS1-E-2015-2	Total/NA	Water	1664A	
720-68998-2	TS2-E-2015-2	Total/NA	Water	1664A	
720-68998-3	FD-2015-2	Total/NA	Water	1664A	
LCS 440-299712/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 440-299712/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 440-299712/1-A	Method Blank	Total/NA	Water	1664A	

TestAmerica Pleasanton

QC Association Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68998-1

General Chemistry (Continued)

Analysis Batch: 299762

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-68998-1	TS1-E-2015-2	Total/NA	Water	1664A	299712
720-68998-2	TS2-E-2015-2	Total/NA	Water	1664A	299712
720-68998-3	FD-2015-2	Total/NA	Water	1664A	299712
LCS 440-299712/2-A	Lab Control Sample	Total/NA	Water	1664A	299712
LCSD 440-299712/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	299712
MB 440-299712/1-A	Method Blank	Total/NA	Water	1664A	299712

Lab Chronicle

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68998-1

Client Sample ID: TS1-E-2015-2

Date Collected: 12/03/15 16:15

Date Received: 12/04/15 12:17

Lab Sample ID: 720-68998-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			207361	12/08/15 15:04	MKN	TAL SEA
Total/NA	Analysis	200.8		1	207526	12/09/15 18:00	FCW	TAL SEA
Total/NA	Prep	1664A			299712	12/11/15 07:02	L1A	TAL IRV
Total/NA	Analysis	1664A		1	299762	12/11/15 10:13	LEG	TAL IRV
Total/NA	Analysis	SM 2540D		1	193742	12/07/15 20:46	EYT	TAL PLS
Total/NA	Analysis	SM 4500 H+ B		1	193675	12/04/15 13:57	MJK	TAL PLS

Client Sample ID: TS2-E-2015-2

Date Collected: 12/03/15 15:35

Date Received: 12/04/15 12:17

Lab Sample ID: 720-68998-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			207361	12/08/15 15:04	MKN	TAL SEA
Total/NA	Analysis	200.8		1	207526	12/09/15 17:10	FCW	TAL SEA
Total/NA	Prep	1664A			299712	12/11/15 07:02	L1A	TAL IRV
Total/NA	Analysis	1664A		1	299762	12/11/15 10:13	LEG	TAL IRV
Total/NA	Analysis	SM 2540D		1	193742	12/07/15 20:46	EYT	TAL PLS
Total/NA	Analysis	SM 4500 H+ B		1	193675	12/04/15 14:08	MJK	TAL PLS

Client Sample ID: FD-2015-2

Date Collected: 12/03/15 15:40

Date Received: 12/04/15 12:17

Lab Sample ID: 720-68998-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			207361	12/08/15 15:04	MKN	TAL SEA
Total/NA	Analysis	200.8		1	207526	12/09/15 18:05	FCW	TAL SEA
Total/NA	Prep	1664A			299712	12/11/15 07:02	L1A	TAL IRV
Total/NA	Analysis	1664A		1	299762	12/11/15 10:13	LEG	TAL IRV
Total/NA	Analysis	SM 2540D		1	193742	12/07/15 20:46	EYT	TAL PLS
Total/NA	Analysis	SM 4500 H+ B		1	193675	12/04/15 14:16	MJK	TAL PLS

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Pleasanton

Certification Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68998-1

Laboratory: TestAmerica Pleasanton

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16 *

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2706	06-30-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
1664A	1664A	Water	SGT-HEM

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

* Certification renewal pending - certification considered valid.

TestAmerica Pleasanton

Method Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68998-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	TAL SEA
1664A	HEM and SGT-HEM	1664A	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL PLS
SM 4500 H+ B	pH	SM	TAL PLS

Protocol References:

1664A = EPA-821-98-002

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater",

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-68998-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-68998-1	TS1-E-2015-2	Water	12/03/15 16:15	12/04/15 12:17
720-68998-2	TS2-E-2015-2	Water	12/03/15 15:35	12/04/15 12:17
720-68998-3	FD-2015-2	Water	12/03/15 15:40	12/04/15 12:17

Chain of Custody Record

720-68998

165378

TestAmerica
1220 Quarry Lane
Pleasanton, CA 94566
Phone: 925-484-1919 ext.137

Please send analytic results, electronic deliverables and the original chain-of-custody form to:
labresults@weiss.com
ajm@weiss.com
sab@weiss.com

INSTRUCTIONS FOR LAB PERSONNEL:
GeoTracker EDF required? ☐ Yes ☒ No
Equus 4-File EDWEDD required? ☒ Yes ☐ No
Specify analytic/prep method and detection limit in report.
Notify us of any anomalous peaks in GC or other scans
Call immediately with any questions or problems.

Client Contact

Project Manager: Scott Bourne

Protocol ID/path: J Levern Richmond/03b Sampling

COC Number:

Weiss Associates

Project ID: 426-2026.01 Task 1.1.3

2200 Powell Street, Suite 925

Sampled by: BPB/AJM

Emeryville, CA 94608

Sample date(s): 12/3/2015

(510) 450-6000 Phone

Analysis Turnaround Time:

(510) 547-5043 FAX

Standard

Job Name: LRT 2015-2016 Annual Storm Water Sampling

Address: Levern Richmond Terminal
402 Wright Avenue, Richmond, CA 94804

Lab ID:

Sample Identification

Analyte (Method ID)

Sample Specific Notes

TS1-E-2015-2

Sample Date

Sample Time

Sample Matrix

of Cont

pH (EPA 9040B)

Total Suspended Solids (SM 2540D)

Oil & Grease (EPA 1664A SGT-HEM)

Total Metals- Al, Cu, Fe, Ni, Pb, Zn (EPA 200.8 ICP-MS)

Page 1 of 1

Shs number:

TS2-E-2015-2

Sample Date

Sample Time

Sample Matrix

of Cont

pH (EPA 9040B)

Total Suspended Solids (SM 2540D)

Oil & Grease (EPA 1664A SGT-HEM)

Total Metals- Al, Cu, Fe, Ni, Pb, Zn (EPA 200.8 ICP-MS)

Page 1 of 1

Shs number:

ED-2015-2

Sample Date

Sample Time

Sample Matrix

of Cont

pH (EPA 9040B)

Total Suspended Solids (SM 2540D)

Oil & Grease (EPA 1664A SGT-HEM)

Total Metals- Al, Cu, Fe, Ni, Pb, Zn (EPA 200.8 ICP-MS)

Page 1 of 1

Shs number:



720-68998 Chain of Custody

Field Filtered (X)

Preservation Used: 1= Ice, 2= HCl, 3= H₂SO₄, 4=HNO₃, 5=NaOH, 6= Other

Special Instructions/OC Requirements & Comments: Level II Report. Report with reporting limit and method detection limit. Analyze and report only the metals listed above (Al, Cu, Fe, Ni, Pb, and Zn).

Relinquished by:

Company: Weiss

Date/Time: 12/3/15 1900

Received by:

Company: Weiss

Date/Time: 12/3/15 1900

Date/Time: 12/4/15 950

Relinquished by:

Company: Weiss

Date/Time: 12/3/15 0940

Received by:

Company: Weiss

Date/Time: 12/4/15 1217

Relinquished by:

Company: Weiss

Date/Time: 12/4/15 1217

Received by:

Company: Weiss

Date/Time: 12/4/15 1217

☑ = Samples released to a secured, locked area.

• = Samples received from a secured, locked area

TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Phone (925) 484-1919 Fax (925) 600-3002

Chain of Custody Record

[illegible]

Chain of Custody Record



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody Record

[illegible]

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-68998-1

Login Number: 68998

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Arauz, Dennis

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-68998-1

Login Number: 68998

List Number: 2

Creator: Ornelas, Olga

List Source: TestAmerica Irvine

List Creation: 12/08/15 01:01 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-68998-1

Login Number: 68998

List Number: 3

Creator: Vance, Diane R

List Source: TestAmerica Seattle

List Creation: 12/08/15 02:35 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time.		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		



WORK ORDER NUMBER: 16-01-0976

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Weiss Associates

Client Project Name: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Attention: Scott Bourne
2200 Powell Street
Suite 925
Emeryville, CA 94608-1879

A handwritten signature in black ink, reading "Virendra R. Patel", enclosed in a hand-drawn oval.

Approved for release on 01/22/2016 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



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Client Project Name: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3
 Work Order Number: 16-01-0976

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Work Order Narrative

Work Order: 16-01-0976Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/15/16. They were assigned to Work Order 16-01-0976.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



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Sample Summary

Client: Weiss Associates	Work Order: 16-01-0976
2200 Powell Street, Suite 925	Project Name: LRT 2015-2016 Annual Storm Water Sampling /
Emeryville, CA 94608-1879	426-2026.01 Task 1.1.3
	PO Number: 426-2026.01 Task 1.1.3
	Date/Time Received: 01/15/16 10:15
	Number of Containers: 6

Attn: Scott Bourne

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TS2-E-2016-1	16-01-0976-1	01/13/16 09:20	3	Aqueous
FD-2016-1	16-01-0976-2	01/13/16 09:25	3	Aqueous


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Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/15/16
Work Order: 16-01-0976
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-E-2016-1	16-01-0976-1-A	01/13/16 09:20	Aqueous	GC 44	01/18/16	01/20/16 15:49	160118L03A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	92	50-135	
2,4,5,6-Tetrachloro-m-Xylene	93	50-135	

FD-2016-1	16-01-0976-2-A	01/13/16 09:25	Aqueous	GC 44	01/18/16	01/20/16 16:03	160118L03A
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	94	50-135	
2,4,5,6-Tetrachloro-m-Xylene	86	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/15/16
Work Order: 16-01-0976
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-529-866	N/A	Aqueous	GC 44	01/18/16	01/20/16 14:52	160118L03A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	97	50-135	
2,4,5,6-Tetrachloro-m-Xylene	76	50-135	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/15/16
Work Order: 16-01-0976
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-E-2016-1	16-01-0976-1-AB	01/13/16 09:20	Aqueous	GC 44	01/19/16	01/21/16 11:27	160119L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
2,4'-DDD	ND	1.3	0.50	1.00	
2,4'-DDE	ND	1.3	0.50	1.00	
2,4'-DDT	ND	2.0	1.0	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	122	50-150	
2,4,5,6-Tetrachloro-m-Xylene	105	50-150	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/15/16
Work Order: 16-01-0976
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FD-2016-1	16-01-0976-2-AB	01/13/16 09:25	Aqueous	GC 44	01/19/16	01/21/16 11:41	160119L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
2,4'-DDD	ND	1.3	0.50	1.00	
2,4'-DDE	ND	1.3	0.50	1.00	
2,4'-DDT	ND	2.0	1.0	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	118	50-150	
2,4,5,6-Tetrachloro-m-Xylene	103	50-150	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/15/16
Work Order: 16-01-0976
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-704-6	N/A	Aqueous	GC 44	01/19/16	01/20/16 19:57	160119L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
2,4'-DDD	ND	1.3	0.50	1.00	
2,4'-DDE	ND	1.3	0.50	1.00	
2,4'-DDT	ND	2.0	1.0	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	101	50-150	
2,4,5,6-Tetrachloro-m-Xylene	77	50-150	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/15/16
Work Order: 16-01-0976
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-529-866	LCS	Aqueous	GC 44	01/18/16	01/20/16 16:46	160118L03A				
099-12-529-866	LCSD	Aqueous	GC 44	01/18/16	01/20/16 20:11	160118L03A				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.4486	90	0.5175	104	50-135	36-149	14	0-25	
Gamma-BHC	0.5000	0.4509	90	0.5275	105	50-135	36-149	16	0-25	
Beta-BHC	0.5000	0.4402	88	0.5190	104	50-135	36-149	16	0-25	
Heptachlor	0.5000	0.4142	83	0.4540	91	50-135	36-149	9	0-25	
Delta-BHC	0.5000	0.4815	96	0.5471	109	50-135	36-149	13	0-25	
Aldrin	0.5000	0.3680	74	0.4063	81	50-135	36-149	10	0-25	
Heptachlor Epoxide	0.5000	0.4713	94	0.5162	103	50-135	36-149	9	0-25	
Endosulfan I	0.5000	0.4508	90	0.5067	101	50-135	36-149	12	0-25	
Dieldrin	0.5000	0.4996	100	0.5434	109	50-135	36-149	8	0-25	
4,4'-DDE	0.5000	0.5092	102	0.5404	108	50-135	36-149	6	0-25	
Endrin	0.5000	0.4855	97	0.5534	111	50-135	36-149	13	0-25	
Endrin Aldehyde	0.5000	0.5143	103	0.5601	112	50-135	36-149	9	0-25	
4,4'-DDD	0.5000	0.5068	101	0.5501	110	50-135	36-149	8	0-25	
Endosulfan II	0.5000	0.4818	96	0.5312	106	50-135	36-149	10	0-25	
4,4'-DDT	0.5000	0.4886	98	0.5493	110	50-135	36-149	12	0-25	
Endosulfan Sulfate	0.5000	0.4904	98	0.5431	109	50-135	36-149	10	0-25	
Methoxychlor	0.5000	0.5218	104	0.5769	115	50-135	36-149	10	0-25	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/15/16
Work Order: 16-01-0976
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 2 of 2

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-704-6	LCS	Aqueous		GC 44	01/19/16	01/20/16 20:25	160119L11			
099-16-704-6	LCSD	Aqueous		GC 44	01/19/16	01/20/16 20:40	160119L11			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	33.35	38.91	117	28.83	86	50-150	33-167	30	0-25	X
4,4'-DDD	33.35	49.75	149	35.21	106	50-150	33-167	34	0-25	X
4,4'-DDE	33.35	51.14	153	36.65	110	50-150	33-167	33	0-25	ME,X
4,4'-DDT	33.35	51.73	155	35.45	106	50-150	33-167	37	0-25	ME,X
Alpha Chlordane	33.35	45.81	137	32.12	96	50-150	33-167	35	0-25	X
Dieldrin	33.35	47.63	143	33.33	100	50-150	33-167	35	0-25	X
Gamma Chlordane	33.35	43.12	129	30.32	91	50-150	33-167	35	0-25	X
Endrin	33.35	49.98	150	33.96	102	50-150	33-167	38	0-25	X
Gamma-BHC	33.35	46.88	141	32.40	97	50-150	33-167	37	0-25	X
Heptachlor	33.35	42.24	127	31.06	93	50-150	33-167	30	0-25	X
Heptachlor Epoxide	33.35	45.29	136	32.06	96	50-150	33-167	34	0-25	X

Total number of LCS compounds: 11

Total number of ME compounds: 2

Total number of ME compounds allowed: 1

LCS ME CL validation result: 'Not Pass (See Narrative)

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Sample Analysis Summary Report

Work Order: 16-01-0976

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8081A	EPA 3510C	669	GC 44	1


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Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 16-01-0976

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDS or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



800-322-5555 www.gso.com

0976

Ship From

CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Tracking #: 530588048

NPS

**Ship To**

CEL
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

ORC
GARDEN GROVE

A

COD: \$0.00

Weight: 0 lb(s)

Reference:

WEISS

Delivery Instructions:

D92845A



47095247

Print Date: 1/14/2016 2:49 PM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

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SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Weiss Assoc.

DATE: 01 / 15 / 2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC4B (CF: +0.3°C); Temperature (w/o CF): 2-4 °C (w/ CF): 2-7 °C; ☒ Blank ☐ Sample☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling☐ Sample(s) received at ambient temperature; placed on ice for transport by courierAmbient Temperature: ☐ Air ☐ FilterChecked by: 836

CUSTODY SEAL:

Cooler ☒ Present and Intact☐ Present but Not Intact☐ Not Present☐ N/AChecked by: 836Sample(s) ☐ Present and Intact☐ Present but Not Intact☒ Not Present☐ N/AChecked by: 1096

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Container(s) for certain analysis free of headspace	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna₂ ☐ 100PJ ☐ 100PJna₂ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB☐ 125PBznn ☐ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs☐ 500PB ☒ 1AGB ☐ 1AGBna₂ ☐ 1AGBs ☐ 1PB ☐ 1PBna ☐ _____ ☐ _____ ☐ _____Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ Other Matrix (_____) ☐ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1096s = H₂SO₄, u = ultra-pure, znn = Zn(CH₃CO₂)₂ + NaOHReviewed by: 836



WORK ORDER NUMBER: 16-01-0975

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Weiss Associates

Client Project Name: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Attention: Scott Bourne
2200 Powell Street
Suite 925
Emeryville, CA 94608-1879

A handwritten signature in black ink, reading "Virendra R. Patel", enclosed in a hand-drawn oval.

Approved for release on 01/22/2016 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3
 Work Order Number: 16-01-0975

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Work Order Narrative

Work Order: 16-01-0975Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/15/16. They were assigned to Work Order 16-01-0975.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



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Sample Summary

Client: Weiss Associates	Work Order: 16-01-0975
2200 Powell Street, Suite 925	Project Name: LRT 2015-2016 Annual Storm Water Sampling /
Emeryville, CA 94608-1879	426-2026.01 Task 1.1.3
	PO Number:
	Date/Time Received: 01/15/16 10:15
	Number of Containers: 3

Attn: Scott Bourne

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TS2-I-2016-1	16-01-0975-1	01/13/16 09:15	3	Aqueous

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Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/15/16
Work Order: 16-01-0975
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-I-2016-1	16-01-0975-1-C	01/13/16 09:15	Aqueous	GC 44	01/18/16	01/20/16 15:35	160118L03A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	92	50-135	
2,4,5,6-Tetrachloro-m-Xylene	116	50-135	

Method Blank	099-12-529-866	N/A	Aqueous	GC 44	01/18/16	01/20/16 14:52	160118L03A
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	97	50-135	
2,4,5,6-Tetrachloro-m-Xylene	76	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/15/16
Work Order: 16-01-0975
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-I-2016-1	16-01-0975-1-AC	01/13/16 09:15	Aqueous	GC 44	01/19/16	01/21/16 11:13	160119L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
2,4'-DDD	ND	1.3	0.50	1.00	
2,4'-DDE	ND	1.3	0.50	1.00	
2,4'-DDT	ND	2.0	1.0	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Decachlorobiphenyl	117	50-150			
2,4,5,6-Tetrachloro-m-Xylene	90	50-150			

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/15/16
Work Order: 16-01-0975
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-704-6	N/A	Aqueous	GC 44	01/19/16	01/20/16 19:57	160119L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
2,4'-DDD	ND	1.3	0.50	1.00	
2,4'-DDE	ND	1.3	0.50	1.00	
2,4'-DDT	ND	2.0	1.0	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	101	50-150	
2,4,5,6-Tetrachloro-m-Xylene	77	50-150	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/15/16
Work Order: 16-01-0975
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-529-866	LCS	Aqueous	GC 44	01/18/16	01/20/16 16:46	160118L03A
099-12-529-866	LCSD	Aqueous	GC 44	01/18/16	01/20/16 20:11	160118L03A

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.4486	90	0.5175	104	50-135	36-149	14	0-25	
Gamma-BHC	0.5000	0.4509	90	0.5275	105	50-135	36-149	16	0-25	
Beta-BHC	0.5000	0.4402	88	0.5190	104	50-135	36-149	16	0-25	
Heptachlor	0.5000	0.4142	83	0.4540	91	50-135	36-149	9	0-25	
Delta-BHC	0.5000	0.4815	96	0.5471	109	50-135	36-149	13	0-25	
Aldrin	0.5000	0.3680	74	0.4063	81	50-135	36-149	10	0-25	
Heptachlor Epoxide	0.5000	0.4713	94	0.5162	103	50-135	36-149	9	0-25	
Endosulfan I	0.5000	0.4508	90	0.5067	101	50-135	36-149	12	0-25	
Dieldrin	0.5000	0.4996	100	0.5434	109	50-135	36-149	8	0-25	
4,4'-DDE	0.5000	0.5092	102	0.5404	108	50-135	36-149	6	0-25	
Endrin	0.5000	0.4855	97	0.5534	111	50-135	36-149	13	0-25	
Endrin Aldehyde	0.5000	0.5143	103	0.5601	112	50-135	36-149	9	0-25	
4,4'-DDD	0.5000	0.5068	101	0.5501	110	50-135	36-149	8	0-25	
Endosulfan II	0.5000	0.4818	96	0.5312	106	50-135	36-149	10	0-25	
4,4'-DDT	0.5000	0.4886	98	0.5493	110	50-135	36-149	12	0-25	
Endosulfan Sulfate	0.5000	0.4904	98	0.5431	109	50-135	36-149	10	0-25	
Methoxychlor	0.5000	0.5218	104	0.5769	115	50-135	36-149	10	0-25	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/15/16
Work Order: 16-01-0975
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 2 of 2

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-704-6	LCS	Aqueous		GC 44	01/19/16	01/20/16 20:25	160119L11			
099-16-704-6	LCSD	Aqueous		GC 44	01/19/16	01/20/16 20:40	160119L11			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	33.35	38.91	117	28.83	86	50-150	33-167	30	0-25	X
4,4'-DDD	33.35	49.75	149	35.21	106	50-150	33-167	34	0-25	X
4,4'-DDE	33.35	51.14	153	36.65	110	50-150	33-167	33	0-25	ME,X
4,4'-DDT	33.35	51.73	155	35.45	106	50-150	33-167	37	0-25	ME,X
Alpha Chlordane	33.35	45.81	137	32.12	96	50-150	33-167	35	0-25	X
Dieldrin	33.35	47.63	143	33.33	100	50-150	33-167	35	0-25	X
Gamma Chlordane	33.35	43.12	129	30.32	91	50-150	33-167	35	0-25	X
Endrin	33.35	49.98	150	33.96	102	50-150	33-167	38	0-25	X
Gamma-BHC	33.35	46.88	141	32.40	97	50-150	33-167	37	0-25	X
Heptachlor	33.35	42.24	127	31.06	93	50-150	33-167	30	0-25	X
Heptachlor Epoxide	33.35	45.29	136	32.06	96	50-150	33-167	34	0-25	X

Total number of LCS compounds: 11

Total number of ME compounds: 2

Total number of ME compounds allowed: 1

LCS ME CL validation result: 'Not Pass (See Narrative)

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Sample Analysis Summary Report

Work Order: 16-01-0975

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8081A	EPA 3510C	669	GC 44	1


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Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 16-01-0975

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



800-322-5555 www.gso.com

0975

Ship From

CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Tracking #: 530588048

NPS



Ship To

CEL
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

ORC
GARDEN GROVE

A

COD: \$0.00

Weight: 0 lb(s)

Reference:

WEISS

Delivery Instructions:

D92845A



47095247

Signature Type: REQUIRED

Print Date: 1/14/2016 2:49 PM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

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SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Weiss Assoc.

DATE: 01 / 15 / 2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC4B (CF: +0.3°C); Temperature (w/o CF): 2.4 °C (w/ CF): 2.7 °C; ☒ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: 836

CUSTODY SEAL:

Cooler ☒ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: 836

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☒ Not Present ☐ N/A Checked by: 1056

SAMPLE CONDITION:

Chain-of-Custody (COC) document(s) received with samples ☒ Yes ☐ No ☐ N/A

COC document(s) received complete ☒ Yes ☐ No ☐ N/A

☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers

☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time

Sampler's name indicated on COC ☒ Yes ☐ No ☐ N/A

Sample container label(s) consistent with COC ☒ Yes ☐ No ☐ N/A

Sample container(s) intact and in good condition ☒ Yes ☐ No ☐ N/A

Proper containers for analyses requested ☒ Yes ☐ No ☐ N/A

Sufficient volume/mass for analyses requested ☒ Yes ☐ No ☐ N/A

Samples received within holding time ☒ Yes ☐ No ☐ N/A

Aqueous samples for certain analyses received within 15-minute holding time

☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen ☐ Yes ☐ No ☒ N/A

Proper preservation chemical(s) noted on COC and/or sample container ☒ Yes ☐ No ☐ N/A

Unpreserved aqueous sample(s) received for certain analyses

☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals

Container(s) for certain analysis free of headspace ☐ Yes ☐ No ☒ N/A

☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)

☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation ☐ Yes ☐ No ☒ N/A

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOAh ☐ VOAna₂ ☐ 100PJ ☐ 100PJna₂ ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB

☐ 125PBznnna ☒ 250AGB ☐ 250CGB ☐ 250CGBs ☐ 250PB ☐ 250PBn ☐ 500AGB ☐ 500AGJ ☐ 500AGJs

☐ 500PB ☒ 1AGB ☐ 1AGBna₂ ☐ 1AGBs ☐ 1PB ☐ 1PBna ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____) ☐ _____ ☐ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1056

s = H₂SO₄, u = ultra-pure, znnna = Zn(CH₃CO₂)₂ + NaOH

Reviewed by: 836

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925)484-1919

TestAmerica Job ID: 720-69746-1

Client Project/Site: LRT 2015-2016 Annual StormWater
Sampling

For:

Weiss Associates

2200 Powell Street

Suite 925

Emeryville, California 94608

Attn: Mr. Scott Bourne



Authorized for release by:

1/28/2016 1:09:59 PM

Micah Smith, Project Manager II

(925)484-1919

micah.smith@testamericainc.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

Job ID: 720-69746-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative 720-69746-1

Comments

No additional comments.

Receipt

The samples were received on 1/14/2016 3:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8° C.

Receipt Exceptions

The following samples were received outside of holding time for pH: TS1-E-2016-1, TS2-E-2016-1, FD-2016-1, TS3-E-2016-1 and SW-11-2016-1.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method(s) 1664A: The method blank (MB) and laboratory control standard (LCS) analyzed for batch 320711 were in control, but were analyzed as HEM, rather than SGT-HEM, since the sample was a non-detect for HEM it did not require the silica gel treatment: TS1-E-2016-1 (720-69746-1), TS2-E-2016-1 (720-69746-2), FD-2016-1 (720-69746-3), TS3-E-2016-1 (720-69746-4) and SW-11-2016-1 (720-69746-5).

Method(s) SM 2540D: The method blank for batch 195689 contained TSS above the reporting limit (RL). Most of the samples associated with this method blank do not contained the target compound; therefore, re-analysis of samples were not performed. Samples TS3-E-2016-1 (720-69746-4) and SW-11-2016-1 (720-69746-5) do have a detection of the target compound, however, there is no sample volume remaining for re-analysis.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

Client Sample ID: TS1-E-2016-1

Lab Sample ID: 720-69746-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Copper	0.0056		0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	0.011	J	0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.00060	J	0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.0015		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.042		0.0070	0.0019	mg/L	1			200.8	Total/NA
SGT-HEM	1.1	J	5.2	0.51	mg/L	1			1664A	Total/NA
HEM	1.1	J B	5.2	0.56	mg/L	1			1664A	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	7.47	H	0.100	0.100	SU	1			9040B	Total/NA

Client Sample ID: TS2-E-2016-1

Lab Sample ID: 720-69746-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Copper	0.013		0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	0.026	J	0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.00075	J	0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.0062		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.045		0.0070	0.0019	mg/L	1			200.8	Total/NA
SGT-HEM	1.5	J	5.1	0.50	mg/L	1			1664A	Total/NA
HEM	1.5	J B	5.1	0.56	mg/L	1			1664A	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	7.66	H	0.100	0.100	SU	1			9040B	Total/NA

Client Sample ID: FD-2016-1

Lab Sample ID: 720-69746-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Copper	0.079		0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	0.069		0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.0012	J	0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.028		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.11		0.0070	0.0019	mg/L	1			200.8	Total/NA
SGT-HEM	2.1	J	5.1	0.50	mg/L	1			1664A	Total/NA
HEM	2.1	J B	5.1	0.55	mg/L	1			1664A	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	7.71	H	0.100	0.100	SU	1			9040B	Total/NA

Client Sample ID: TS3-E-2016-1

Lab Sample ID: 720-69746-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Copper	0.0018	J	0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	0.057		0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.0013	J	0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.0018		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.054		0.0070	0.0019	mg/L	1			200.8	Total/NA
SGT-HEM	2.0	J	5.1	0.50	mg/L	1			1664A	Total/NA
HEM	2.0	J B	5.1	0.56	mg/L	1			1664A	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	7.11	H	0.100	0.100	SU	1			9040B	Total/NA
Total Suspended Solids	1.8	B	1.0	1.0	mg/L	1			SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Detection Summary

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

Client Sample ID: SW-11-2016-1

Lab Sample ID: 720-69746-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Copper	0.0022		0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	0.14		0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.0033		0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.0036		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.093		0.0070	0.0019	mg/L	1			200.8	Total/NA
SGT-HEM	1.7	J	5.0	0.49	mg/L	1			1664A	Total/NA
HEM	1.7	J B	5.0	0.54	mg/L	1			1664A	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	7.70	H	0.100	0.100	SU	1			9040B	Total/NA
Total Suspended Solids	11	B	1.0	1.0	mg/L	1			SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

Client Sample ID: TS1-E-2016-1

Date Collected: 01/13/16 08:50

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69746-1

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		01/18/16 08:52	01/19/16 13:25	1
Copper	0.0056		0.0020	0.00060	mg/L		01/18/16 08:52	01/19/16 13:25	1
Iron	0.011	J	0.040	0.0058	mg/L		01/18/16 08:52	01/19/16 13:25	1
Nickel	0.00060	J	0.0030	0.00040	mg/L		01/18/16 08:52	01/19/16 13:25	1
Lead	0.0015		0.00040	0.000034	mg/L		01/18/16 08:52	01/19/16 13:25	1
Zinc	0.042		0.0070	0.0019	mg/L		01/18/16 08:52	01/19/16 13:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	1.1	J	5.2	0.51	mg/L		01/25/16 15:27	01/25/16 17:10	1
HEM	1.1	J B	5.2	0.56	mg/L		01/25/16 15:27	01/25/16 17:10	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.47	H	0.100	0.100	SU			01/14/16 21:57	1
Total Suspended Solids	<1.0		1.0	1.0	mg/L			01/15/16 16:17	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

Client Sample ID: TS2-E-2016-1

Date Collected: 01/13/16 09:20

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69746-2

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		01/18/16 08:52	01/19/16 13:30	1
Copper	0.013		0.0020	0.00060	mg/L		01/18/16 08:52	01/19/16 13:30	1
Iron	0.026	J	0.040	0.0058	mg/L		01/18/16 08:52	01/19/16 13:30	1
Nickel	0.00075	J	0.0030	0.00040	mg/L		01/18/16 08:52	01/19/16 13:30	1
Lead	0.0062		0.00040	0.000034	mg/L		01/18/16 08:52	01/19/16 13:30	1
Zinc	0.045		0.0070	0.0019	mg/L		01/18/16 08:52	01/19/16 13:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	1.5	J	5.1	0.50	mg/L		01/25/16 15:33	01/25/16 17:14	1
HEM	1.5	J B	5.1	0.56	mg/L		01/25/16 15:33	01/25/16 17:14	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.66	H	0.100	0.100	SU			01/14/16 22:03	1
Total Suspended Solids	<1.0		1.0	1.0	mg/L			01/15/16 16:17	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

Client Sample ID: FD-2016-1

Date Collected: 01/13/16 09:25

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69746-3

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		01/18/16 08:52	01/19/16 13:34	1
Copper	0.079		0.0020	0.00060	mg/L		01/18/16 08:52	01/19/16 13:34	1
Iron	0.069		0.040	0.0058	mg/L		01/18/16 08:52	01/19/16 13:34	1
Nickel	0.0012	J	0.0030	0.00040	mg/L		01/18/16 08:52	01/19/16 13:34	1
Lead	0.028		0.00040	0.000034	mg/L		01/18/16 08:52	01/19/16 13:34	1
Zinc	0.11		0.0070	0.0019	mg/L		01/18/16 08:52	01/19/16 13:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	2.1	J	5.1	0.50	mg/L		01/25/16 15:38	01/25/16 17:18	1
HEM	2.1	J B	5.1	0.55	mg/L		01/25/16 15:38	01/25/16 17:18	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.71	H	0.100	0.100	SU			01/14/16 22:08	1
Total Suspended Solids	<1.0		1.0	1.0	mg/L			01/15/16 16:17	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

Client Sample ID: TS3-E-2016-1

Date Collected: 01/13/16 08:30

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69746-4

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		01/18/16 08:52	01/19/16 13:39	1
Copper	0.0018	J	0.0020	0.00060	mg/L		01/18/16 08:52	01/19/16 13:39	1
Iron	0.057		0.040	0.0058	mg/L		01/18/16 08:52	01/19/16 13:39	1
Nickel	0.0013	J	0.0030	0.00040	mg/L		01/18/16 08:52	01/19/16 13:39	1
Lead	0.0018		0.00040	0.000034	mg/L		01/18/16 08:52	01/19/16 13:39	1
Zinc	0.054		0.0070	0.0019	mg/L		01/18/16 08:52	01/19/16 13:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	2.0	J	5.1	0.50	mg/L		01/25/16 15:44	01/25/16 17:22	1
HEM	2.0	J B	5.1	0.56	mg/L		01/25/16 15:44	01/25/16 17:22	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.11	H	0.100	0.100	SU			01/14/16 22:12	1
Total Suspended Solids	1.8	B	1.0	1.0	mg/L			01/15/16 16:17	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

Client Sample ID: SW-11-2016-1

Date Collected: 01/13/16 07:55

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69746-5

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		01/18/16 08:52	01/19/16 13:44	1
Copper	0.0022		0.0020	0.00060	mg/L		01/18/16 08:52	01/19/16 13:44	1
Iron	0.14		0.040	0.0058	mg/L		01/18/16 08:52	01/19/16 13:44	1
Nickel	0.0033		0.0030	0.00040	mg/L		01/18/16 08:52	01/19/16 13:44	1
Lead	0.0036		0.00040	0.000034	mg/L		01/18/16 08:52	01/19/16 13:44	1
Zinc	0.093		0.0070	0.0019	mg/L		01/18/16 08:52	01/19/16 13:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	1.7	J	5.0	0.49	mg/L		01/25/16 15:49	01/25/16 17:26	1
HEM	1.7	J B	5.0	0.54	mg/L		01/25/16 15:49	01/25/16 17:26	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.70	H	0.100	0.100	SU			01/14/16 22:16	1
Total Suspended Solids	11	B	1.0	1.0	mg/L			01/15/16 16:17	1

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-209712/14-A

Matrix: Water

Analysis Batch: 209817

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 209712

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		01/18/16 08:53	01/19/16 12:21	1
Copper	<0.00060		0.0020	0.00060	mg/L		01/18/16 08:53	01/19/16 12:21	1
Iron	<0.0058		0.040	0.0058	mg/L		01/18/16 08:53	01/19/16 12:21	1
Nickel	<0.00040		0.0030	0.00040	mg/L		01/18/16 08:53	01/19/16 12:21	1
Lead	<0.000034		0.00040	0.000034	mg/L		01/18/16 08:53	01/19/16 12:21	1
Zinc	<0.0019		0.0070	0.0019	mg/L		01/18/16 08:53	01/19/16 12:21	1

Lab Sample ID: LCS 580-209712/15-A

Matrix: Water

Analysis Batch: 209817

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 209712

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	1.00	1.06		mg/L		106	85 - 115
Copper	0.100	0.0930		mg/L		93	85 - 115
Iron	10.0	9.55		mg/L		96	85 - 115
Nickel	0.100	0.0923		mg/L		92	85 - 115
Lead	0.100	0.0987		mg/L		99	85 - 115
Zinc	0.100	0.0922		mg/L		92	85 - 115

Lab Sample ID: LCSD 580-209712/16-A

Matrix: Water

Analysis Batch: 209817

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 209712

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	1.00	1.03		mg/L		103	85 - 115	3	20
Copper	0.100	0.0948		mg/L		95	85 - 115	2	20
Iron	10.0	9.45		mg/L		95	85 - 115	1	20
Nickel	0.100	0.0921		mg/L		92	85 - 115	0	20
Lead	0.100	0.0992		mg/L		99	85 - 115	1	20
Zinc	0.100	0.0924		mg/L		92	85 - 115	0	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 500-320710/1-A

Matrix: Water

Analysis Batch: 320711

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 320710

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	1.60	J	5.0	0.54	mg/L		01/25/16 13:50	01/25/16 16:00	1

Lab Sample ID: LCS 500-320710/2-A

Matrix: Water

Analysis Batch: 320711

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 320710

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	38.5		mg/L		96	78 - 114

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

Method: 9040B - pH

Lab Sample ID: LCS 720-195606/1
Matrix: Water
Analysis Batch: 195606

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	6.950		SU		99	99 - 101

Lab Sample ID: 720-69746-1 DU
Matrix: Water
Analysis Batch: 195606

Client Sample ID: TS1-E-2016-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.47	H	7.520		SU		0.7	5

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 720-195689/3
Matrix: Water
Analysis Batch: 195689

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	3.30		1.0	1.0	mg/L			01/15/16 16:17	1

Lab Sample ID: LCS 720-195689/1
Matrix: Water
Analysis Batch: 195689

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	500	479		mg/L		96	69 - 117

Lab Sample ID: LCSD 720-195689/2
Matrix: Water
Analysis Batch: 195689

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	500	448		mg/L		90	69 - 117	7	20

TestAmerica Pleasanton

QC Association Summary

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

Metals

Prep Batch: 209712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69746-1	TS1-E-2016-1	Total/NA	Water	200.8	
720-69746-2	TS2-E-2016-1	Total/NA	Water	200.8	
720-69746-3	FD-2016-1	Total/NA	Water	200.8	
720-69746-4	TS3-E-2016-1	Total/NA	Water	200.8	
720-69746-5	SW-11-2016-1	Total/NA	Water	200.8	
LCS 580-209712/15-A	Lab Control Sample	Total/NA	Water	200.8	
LCSD 580-209712/16-A	Lab Control Sample Dup	Total/NA	Water	200.8	
MB 580-209712/14-A	Method Blank	Total/NA	Water	200.8	

Analysis Batch: 209817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69746-1	TS1-E-2016-1	Total/NA	Water	200.8	209712
720-69746-2	TS2-E-2016-1	Total/NA	Water	200.8	209712
720-69746-3	FD-2016-1	Total/NA	Water	200.8	209712
720-69746-4	TS3-E-2016-1	Total/NA	Water	200.8	209712
720-69746-5	SW-11-2016-1	Total/NA	Water	200.8	209712
LCS 580-209712/15-A	Lab Control Sample	Total/NA	Water	200.8	209712
LCSD 580-209712/16-A	Lab Control Sample Dup	Total/NA	Water	200.8	209712
MB 580-209712/14-A	Method Blank	Total/NA	Water	200.8	209712

General Chemistry

Analysis Batch: 195606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69746-1	TS1-E-2016-1	Total/NA	Water	9040B	
720-69746-1 DU	TS1-E-2016-1	Total/NA	Water	9040B	
720-69746-2	TS2-E-2016-1	Total/NA	Water	9040B	
720-69746-3	FD-2016-1	Total/NA	Water	9040B	
720-69746-4	TS3-E-2016-1	Total/NA	Water	9040B	
720-69746-5	SW-11-2016-1	Total/NA	Water	9040B	
LCS 720-195606/1	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 195689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69746-1	TS1-E-2016-1	Total/NA	Water	SM 2540D	
720-69746-2	TS2-E-2016-1	Total/NA	Water	SM 2540D	
720-69746-3	FD-2016-1	Total/NA	Water	SM 2540D	
720-69746-4	TS3-E-2016-1	Total/NA	Water	SM 2540D	
720-69746-5	SW-11-2016-1	Total/NA	Water	SM 2540D	
LCS 720-195689/1	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 720-195689/2	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
MB 720-195689/3	Method Blank	Total/NA	Water	SM 2540D	

Prep Batch: 320710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69746-1	TS1-E-2016-1	Total/NA	Water	1664A	
720-69746-2	TS2-E-2016-1	Total/NA	Water	1664A	
720-69746-3	FD-2016-1	Total/NA	Water	1664A	
720-69746-4	TS3-E-2016-1	Total/NA	Water	1664A	
720-69746-5	SW-11-2016-1	Total/NA	Water	1664A	

TestAmerica Pleasanton

QC Association Summary

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

General Chemistry (Continued)

Prep Batch: 320710 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-320710/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 500-320710/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 320711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69746-1	TS1-E-2016-1	Total/NA	Water	1664A	320710
720-69746-2	TS2-E-2016-1	Total/NA	Water	1664A	320710
720-69746-3	FD-2016-1	Total/NA	Water	1664A	320710
720-69746-4	TS3-E-2016-1	Total/NA	Water	1664A	320710
720-69746-5	SW-11-2016-1	Total/NA	Water	1664A	320710
LCS 500-320710/2-A	Lab Control Sample	Total/NA	Water	1664A	320710
MB 500-320710/1-A	Method Blank	Total/NA	Water	1664A	320710

Lab Chronicle

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

Client Sample ID: TS1-E-2016-1

Date Collected: 01/13/16 08:50

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69746-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			209712	01/18/16 08:52	MKN	TAL SEA
Total/NA	Analysis	200.8		1	209817	01/19/16 13:25	FCW	TAL SEA
Total/NA	Prep	1664A			320710	01/25/16 15:27	SSF	TAL CHI
Total/NA	Analysis	1664A		1	320711	01/25/16 17:10	SSF	TAL CHI
Total/NA	Analysis	9040B		1	195606	01/14/16 21:57	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	195689	01/15/16 16:17	EYT	TAL PLS

Client Sample ID: TS2-E-2016-1

Date Collected: 01/13/16 09:20

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69746-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			209712	01/18/16 08:52	MKN	TAL SEA
Total/NA	Analysis	200.8		1	209817	01/19/16 13:30	FCW	TAL SEA
Total/NA	Prep	1664A			320710	01/25/16 15:33	SSF	TAL CHI
Total/NA	Analysis	1664A		1	320711	01/25/16 17:14	SSF	TAL CHI
Total/NA	Analysis	9040B		1	195606	01/14/16 22:03	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	195689	01/15/16 16:17	EYT	TAL PLS

Client Sample ID: FD-2016-1

Date Collected: 01/13/16 09:25

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69746-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			209712	01/18/16 08:52	MKN	TAL SEA
Total/NA	Analysis	200.8		1	209817	01/19/16 13:34	FCW	TAL SEA
Total/NA	Prep	1664A			320710	01/25/16 15:38	SSF	TAL CHI
Total/NA	Analysis	1664A		1	320711	01/25/16 17:18	SSF	TAL CHI
Total/NA	Analysis	9040B		1	195606	01/14/16 22:08	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	195689	01/15/16 16:17	EYT	TAL PLS

Client Sample ID: TS3-E-2016-1

Date Collected: 01/13/16 08:30

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69746-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			209712	01/18/16 08:52	MKN	TAL SEA
Total/NA	Analysis	200.8		1	209817	01/19/16 13:39	FCW	TAL SEA
Total/NA	Prep	1664A			320710	01/25/16 15:44	SSF	TAL CHI
Total/NA	Analysis	1664A		1	320711	01/25/16 17:22	SSF	TAL CHI
Total/NA	Analysis	9040B		1	195606	01/14/16 22:12	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	195689	01/15/16 16:17	EYT	TAL PLS

TestAmerica Pleasanton

Lab Chronicle

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

Client Sample ID: SW-11-2016-1

Date Collected: 01/13/16 07:55

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69746-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			209712	01/18/16 08:52	MKN	TAL SEA
Total/NA	Analysis	200.8		1	209817	01/19/16 13:44	FCW	TAL SEA
Total/NA	Prep	1664A			320710	01/25/16 15:49	SSF	TAL CHI
Total/NA	Analysis	1664A		1	320711	01/25/16 17:26	SSF	TAL CHI
Total/NA	Analysis	9040B		1	195606	01/14/16 22:16	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	195689	01/15/16 16:17	EYT	TAL PLS

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Certification Summary

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69746-1

Laboratory: TestAmerica Pleasanton

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16 *
Analysis Method	Prep Method	Matrix	Analyte	

Laboratory: TestAmerica Chicago

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40461	04-30-16
California	State Program	9	2903	04-30-16
Georgia	State Program	4	N/A	04-30-16
Georgia	State Program	4	939	04-30-16
Hawaii	State Program	9	N/A	04-30-16
Illinois	NELAP	5	100201	04-30-16
Indiana	State Program	5	C-IL-02	04-30-16
Iowa	State Program	7	82	05-01-16
Kansas	NELAP	7	E-10161	01-31-16 *
Kentucky (UST)	State Program	4	66	04-30-16
Kentucky (WW)	State Program	4	KY90023	12-31-16
Massachusetts	State Program	1	M-IL035	06-30-16
Mississippi	State Program	4	N/A	04-30-16
New York	NELAP	2	IL00035	04-01-16
North Carolina (WW/SW)	State Program	4	291	12-31-16
North Dakota	State Program	8	R-194	04-30-16
Oklahoma	State Program	6	8908	08-31-16
South Carolina	State Program	4	77001	04-30-16
USDA	Federal		P330-15-00038	02-11-18
Wisconsin	State Program	5	999580010	08-31-16
Wyoming	State Program	8	8TMS-Q	04-30-16

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-16
L-A-B	DoD ELAP		L2236	01-19-19
L-A-B	ISO/IEC 17025		L2236	01-19-19
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

* Certification renewal pending - certification considered valid.

TestAmerica Pleasanton

Method Summary

Client: Weiss Associates

TestAmerica Job ID: 720-69746-1

Project/Site: LRT 2015-2016 Annual StormWater Sampling

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	TAL SEA
1664A	HEM and SGT-HEM	1664A	TAL CHI
9040B	pH	SW846	TAL PLS
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL PLS

Protocol References:

1664A = EPA-821-98-002

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Weiss Associates

TestAmerica Job ID: 720-69746-1

Project/Site: LRT 2015-2016 Annual StormWater Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-69746-1	TS1-E-2016-1	Water	01/13/16 08:50	01/14/16 15:20
720-69746-2	TS2-E-2016-1	Water	01/13/16 09:20	01/14/16 15:20
720-69746-3	FD-2016-1	Water	01/13/16 09:25	01/14/16 15:20
720-69746-4	TS3-E-2016-1	Water	01/13/16 08:30	01/14/16 15:20
720-69746-5	SW-11-2016-1	Water	01/13/16 07:55	01/14/16 15:20

720-69746

Chain of Custody Record

TestAmerica

1220 Quarry Lane

Pleasanton, CA 94566

Phone: 925-484-1919 ext.137

Please send analytic results, electronic deliverables and the original chain-of-custody form to:
labresults@weiss.com
ajm@weiss.com
sab@weiss.com

INSTRUCTIONS FOR LAB PERSONNEL:

GeoTracker EDF required? ☐ Yes ☒ No
Equis 4-file EDWEDD required? ☒ Yes ☐ No
Specify analytic/prep method and detection limit in report.
Notify us of any anomalous peaks in GC or other scans
Call immediately with any questions or problems.

Client Contact

Project Manager: Scott Bourne

Weiss Associates

2200 Powell Street, Suite 925

Emeryville, CA 94608

Phone (510) 450-6000

FAX (510) 547-5043

Job Name: LRT 2015-2016 Annual Storm Water Sampling

Address: 402 Wright Avenue, Richmond, CA 94804

(Specify Days or Hours)

Analysis Turnaround Time:

Standard

Protocol ID/path: J:\Levin Richmond\03b_Sampling

COC Number:

Page 1 of 1

SDG number:

Sample Specific Notes:

Sample Identification

Analyte (Method ID)

pH (EPA 9040B)

Total Suspended Solids (SM 2540D)

Oil & Grease (BPA 1664A SGT-HBM)

Total Metals- Al,Cu, Fe, Ni, Pb, Zn (BPA 200 8 ICP-MS)

TS1-E-2016-1

Sample Date

Sample Time

Sample Matrix

of Cont.

X X X X X

TS2-E-2016-1

1/13/2016

0920

W

5

X X X X X

FD-2016-1

1/13/2016

0925

W

5

X X X X X

TS3-E-2016-1

1/13/2016

0830

W

5

X X X X X

SW-11-2016-1

1/13/2016

0755

W

5

X X X X X

Field Filtered (N)

Preservation Used: 1= Ice, 2= HCl, 3= H₂SO₄, 4=HNO₃, 5=NaOH, 6= Other

Special Instructions/OC Requirements & Comments: Level II Report. Report with reporting limit and method detection limit. Analyze and report only the metals listed above (Al, Cu, Fe, Ni, Pb, and Zn).

Relinquished by

Company

Date/Time

Received by

Company

Date/Time

Relinquished by

Company

Date/Time

Received by

Company

Date/Time

Relinquished by

Company

Date/Time

Received by

Company

Date/Time

1.82

1.82



720-69746 Chain of Custody

1220 Quarry Lane
Pleasanton, CA 94566
Phone (925) 484-1919 Fax (925) 600-3002

[illegible]

THE LEADER IN ENVIRONMENTAL TESTING

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1/28/2016

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-69746-1

Login Number: 69746

List Number: 1

Creator: Bullock, Tracy

List Source: TestAmerica Pleasanton

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	False	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-69746-1

Login Number: 69746

List Number: 3

Creator: Scott, Sherri L

List Source: TestAmerica Chicago

List Creation: 01/18/16 07:50 AM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	-0.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-69746-1

Login Number: 69746

List Number: 2

Creator: Luna, Francisco J

List Source: TestAmerica Seattle

List Creation: 01/16/16 01:00 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	IR2 9.2c/9.3c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925)484-1919

TestAmerica Job ID: 720-69743-1

Client Project/Site: LRT 2015-2016 Annual StormWater
Sampling

For:

Weiss Associates

2200 Powell Street

Suite 925

Emeryville, California 94608

Attn: Mr. Scott Bourne



Authorized for release by:

1/28/2016 12:57:46 PM

Micah Smith, Project Manager II

(925)484-1919

micah.smith@testamericainc.com

LINKS

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results through

TotalAccess

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Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69743-1

Qualifiers

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
H	Sample was prepped or analyzed beyond the specified holding time
F1	MS and/or MSD Recovery is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69743-1

Job ID: 720-69743-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative 720-69743-1

Comments

No additional comments.

Receipt

The samples were received on 1/14/2016 3:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

Receipt Exceptions

The following samples were received outside of holding time for pH: TS1-I-2016-1, TS2-I-2016-1, TS3-I-2016-1.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

Method(s) 1664A: The method blank (MB) and laboratory control standard (LCS) analyzed for batch 320412 were in control, but were analyzed as HEM, rather than SGT-HEM, since the sample was a non-detect for HEM it did not require the silica gel treatment: TS1-I-2016-1 (720-69743-1).

Method(s) 1664A: The method blank (MB) and laboratory control standard (LCS) analyzed for batch 320434 were in control, but were analyzed as HEM, rather than SGT-HEM, since the samples were non-detect for HEM they did not require the silica gel treatment: TS2-I-2016-1 (720-69743-2).

Method(s) SM 2540D: The laboratory control sample duplicate (LCSD) RPD% for analytical batch 720-195768 was outside acceptance limits for TSS. There was insufficient sample to perform a re-extraction or re-analysis; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69743-1

Client Sample ID: TS1-I-2016-1

Lab Sample ID: 720-69743-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	0.43		0.10	0.10	mg/L	1			200.8	Total/NA
Copper	0.0073		0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	1.5		0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.0042		0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.032		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.13		0.0070	0.0019	mg/L	1			200.8	Total/NA
SGT-HEM	2.5	J	5.0	0.49	mg/L	1			1664A	Total/NA
HEM	2.5	J B	5.0	0.54	mg/L	1			1664A	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	7.76	H	0.100	0.100	SU	1			9040B	Total/NA
Total Suspended Solids	140		5.0	5.0	mg/L	1			SM 2540D	Total/NA

Client Sample ID: TS2-I-2016-1

Lab Sample ID: 720-69743-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	0.37		0.10	0.10	mg/L	1			200.8	Total/NA
Copper	0.011		0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	1.3		0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.0032		0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.022		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.12		0.0070	0.0019	mg/L	1			200.8	Total/NA
SGT-HEM	3.3	J	5.0	0.49	mg/L	1			1664A	Total/NA
HEM	3.3	J F1 B	5.0	0.54	mg/L	1			1664A	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	7.82	H	0.100	0.100	SU	1			9040B	Total/NA
Total Suspended Solids	98		4.0	4.0	mg/L	1			SM 2540D	Total/NA

Client Sample ID: TS3-I-2016-1

Lab Sample ID: 720-69743-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	0.24		0.10	0.10	mg/L	1			200.8	Total/NA
Copper	0.011		0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	0.62		0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.0049		0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.019		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.080		0.0070	0.0019	mg/L	1			200.8	Total/NA
SGT-HEM	3.5	J B	5.2	0.51	mg/L	1			1664A	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	6.61	H	0.100	0.100	SU	1			9040B	Total/NA
Total Suspended Solids	49	*	4.3	4.3	mg/L	1			SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69743-1

Client Sample ID: TS1-I-2016-1

Date Collected: 01/13/16 09:00

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69743-1

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.43		0.10	0.10	mg/L		01/18/16 09:32	01/20/16 09:55	1
Copper	0.0073		0.0020	0.00060	mg/L		01/18/16 09:32	01/20/16 09:55	1
Iron	1.5		0.040	0.0058	mg/L		01/18/16 09:32	01/20/16 09:55	1
Nickel	0.0042		0.0030	0.00040	mg/L		01/18/16 09:32	01/20/16 09:55	1
Lead	0.032		0.00040	0.000034	mg/L		01/18/16 09:32	01/20/16 09:55	1
Zinc	0.13		0.0070	0.0019	mg/L		01/18/16 09:32	01/20/16 09:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	2.5	J	5.0	0.49	mg/L		01/21/16 18:39	01/21/16 20:06	1
HEM	2.5	J B	5.0	0.54	mg/L		01/21/16 18:39	01/21/16 20:06	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.76	H	0.100	0.100	SU			01/14/16 22:19	1
Total Suspended Solids	140		5.0	5.0	mg/L			01/19/16 15:23	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69743-1

Client Sample ID: TS2-I-2016-1

Date Collected: 01/13/16 09:15

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69743-2

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.37		0.10	0.10	mg/L		01/18/16 09:32	01/20/16 10:00	1
Copper	0.011		0.0020	0.00060	mg/L		01/18/16 09:32	01/20/16 10:00	1
Iron	1.3		0.040	0.0058	mg/L		01/18/16 09:32	01/20/16 10:00	1
Nickel	0.0032		0.0030	0.00040	mg/L		01/18/16 09:32	01/20/16 10:00	1
Lead	0.022		0.00040	0.000034	mg/L		01/18/16 09:32	01/20/16 10:00	1
Zinc	0.12		0.0070	0.0019	mg/L		01/18/16 09:32	01/20/16 10:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	3.3	J	5.0	0.49	mg/L		01/21/16 21:57	01/21/16 23:16	1
HEM	3.3	J F1 B	5.0	0.54	mg/L		01/21/16 21:57	01/21/16 23:16	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.82	H	0.100	0.100	SU			01/14/16 22:25	1
Total Suspended Solids	98		4.0	4.0	mg/L			01/19/16 15:23	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69743-1

Client Sample ID: TS3-I-2016-1

Date Collected: 01/13/16 08:15

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69743-3

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.24		0.10	0.10	mg/L		01/18/16 09:32	01/20/16 10:04	1
Copper	0.011		0.0020	0.00060	mg/L		01/18/16 09:32	01/20/16 10:04	1
Iron	0.62		0.040	0.0058	mg/L		01/18/16 09:32	01/20/16 10:04	1
Nickel	0.0049		0.0030	0.00040	mg/L		01/18/16 09:32	01/20/16 10:04	1
Lead	0.019		0.00040	0.000034	mg/L		01/18/16 09:32	01/20/16 10:04	1
Zinc	0.080		0.0070	0.0019	mg/L		01/18/16 09:32	01/20/16 10:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	3.5	J B	5.2	0.51	mg/L		01/25/16 15:22	01/26/16 20:43	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.61	H	0.100	0.100	SU			01/14/16 22:28	1
Total Suspended Solids	49	*	4.3	4.3	mg/L			01/18/16 17:49	1

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69743-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-209714/14-A

Matrix: Water

Analysis Batch: 209879

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 209714

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		01/18/16 09:32	01/20/16 08:51	1
Copper	<0.00060		0.0020	0.00060	mg/L		01/18/16 09:32	01/20/16 08:51	1
Iron	<0.0058		0.040	0.0058	mg/L		01/18/16 09:32	01/20/16 08:51	1
Nickel	<0.00040		0.0030	0.00040	mg/L		01/18/16 09:32	01/20/16 08:51	1
Lead	<0.000034		0.00040	0.000034	mg/L		01/18/16 09:32	01/20/16 08:51	1
Zinc	<0.0019		0.0070	0.0019	mg/L		01/18/16 09:32	01/20/16 08:51	1

Lab Sample ID: LCS 580-209714/15-A

Matrix: Water

Analysis Batch: 209879

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 209714

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	1.00	0.895		mg/L		89	85 - 115
Copper	0.100	0.0946		mg/L		95	85 - 115
Iron	10.0	9.99		mg/L		100	85 - 115
Nickel	0.100	0.0964		mg/L		96	85 - 115
Lead	0.100	0.0977		mg/L		98	85 - 115
Zinc	0.100	0.0948		mg/L		95	85 - 115

Lab Sample ID: LCSD 580-209714/16-A

Matrix: Water

Analysis Batch: 209879

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 209714

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	1.00	0.890		mg/L		89	85 - 115	0	20
Copper	0.100	0.0936		mg/L		94	85 - 115	1	20
Iron	10.0	9.84		mg/L		98	85 - 115	2	20
Nickel	0.100	0.0956		mg/L		96	85 - 115	1	20
Lead	0.100	0.0968		mg/L		97	85 - 115	1	20
Zinc	0.100	0.0942		mg/L		94	85 - 115	1	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 500-320408/1-A

Matrix: Water

Analysis Batch: 320412

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 320408

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	1.20	J	5.0	0.54	mg/L		01/21/16 15:50	01/21/16 19:10	1

Lab Sample ID: LCS 500-320408/2-A

Matrix: Water

Analysis Batch: 320412

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 320408

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	31.4		mg/L		78	78 - 114

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69743-1

Method: 1664A - HEM and SGT-HEM (Continued)

Lab Sample ID: MB 500-320432/1-A

Matrix: Water

Analysis Batch: 320434

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 320432

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	1.80	J	5.0	0.54	mg/L	-	01/21/16 19:55	01/21/16 22:20	1

Lab Sample ID: LCS 500-320432/2-A

Matrix: Water

Analysis Batch: 320434

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 320432

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	33.5		mg/L	-	84	78 - 114

Lab Sample ID: 720-69743-2 MS

Matrix: Water

Analysis Batch: 320434

Client Sample ID: TS2-I-2016-1

Prep Type: Total/NA

Prep Batch: 320432

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	3.3	J F1 B	40.6	26.0	F1	mg/L	-	56	78 - 114

Lab Sample ID: MB 500-320710/1-A

Matrix: Water

Analysis Batch: 320711

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 320710

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HEM	1.60	J	5.0	0.54	mg/L	-	01/25/16 13:50	01/25/16 16:00	1

Lab Sample ID: MB 500-320710/1-A

Matrix: Water

Analysis Batch: 320882

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 320710

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	1.00	J	5.0	0.49	mg/L	-	01/25/16 13:50	01/26/16 20:20	1

Lab Sample ID: LCS 500-320710/2-A

Matrix: Water

Analysis Batch: 320711

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 320710

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HEM	40.0	38.5		mg/L	-	96	78 - 114

Lab Sample ID: LCS 500-320710/2-A

Matrix: Water

Analysis Batch: 320882

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 320710

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
SGT-HEM	20.0	14.4		mg/L	-	72	64 - 132

Lab Sample ID: MB 500-320745/1-A

Matrix: Water

Analysis Batch: 320882

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 320745

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	0.900	J	5.0	0.49	mg/L	-	01/25/16 17:10	01/26/16 20:55	1

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69743-1

Lab Sample ID: LCS 500-320745/2-A
Matrix: Water
Analysis Batch: 320882

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 320745
%Rec. Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
SGT-HEM	20.0	13.0		mg/L		65	64 - 132

Method: 9040B - pH

Lab Sample ID: LCS 720-195606/1
Matrix: Water
Analysis Batch: 195606

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	6.950		SU		99	99 - 101

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 720-195768/3
Matrix: Water
Analysis Batch: 195768

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.0		1.0	1.0	mg/L			01/18/16 17:49	1

Lab Sample ID: LCS 720-195768/1
Matrix: Water
Analysis Batch: 195768

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	500	453		mg/L		91	69 - 117

Lab Sample ID: LCSD 720-195768/2
Matrix: Water
Analysis Batch: 195768

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	500	365	*	mg/L		73	69 - 117	22	20

Lab Sample ID: 720-69743-A-1 DU
Matrix: Water
Analysis Batch: 195768

Client Sample ID: 720-69743-A-1 DU
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	140	*	141	*	mg/L		0	10

Lab Sample ID: MB 720-195829/3
Matrix: Water
Analysis Batch: 195829

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.0		1.0	1.0	mg/L			01/19/16 15:23	1

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69743-1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 720-195829/1

Matrix: Water

Analysis Batch: 195829

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	500	449		mg/L		90	69 - 117

Lab Sample ID: LCSD 720-195829/2

Matrix: Water

Analysis Batch: 195829

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	500	423		mg/L		85	69 - 117	6	20

QC Association Summary

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69743-1

Metals

Prep Batch: 209714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69743-1	TS1-I-2016-1	Total/NA	Water	200.8	
720-69743-2	TS2-I-2016-1	Total/NA	Water	200.8	
720-69743-3	TS3-I-2016-1	Total/NA	Water	200.8	
LCS 580-209714/15-A	Lab Control Sample	Total/NA	Water	200.8	
LCSD 580-209714/16-A	Lab Control Sample Dup	Total/NA	Water	200.8	
MB 580-209714/14-A	Method Blank	Total/NA	Water	200.8	

Analysis Batch: 209879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69743-1	TS1-I-2016-1	Total/NA	Water	200.8	209714
720-69743-2	TS2-I-2016-1	Total/NA	Water	200.8	209714
720-69743-3	TS3-I-2016-1	Total/NA	Water	200.8	209714
LCS 580-209714/15-A	Lab Control Sample	Total/NA	Water	200.8	209714
LCSD 580-209714/16-A	Lab Control Sample Dup	Total/NA	Water	200.8	209714
MB 580-209714/14-A	Method Blank	Total/NA	Water	200.8	209714

General Chemistry

Analysis Batch: 195606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69743-1	TS1-I-2016-1	Total/NA	Water	9040B	
720-69743-2	TS2-I-2016-1	Total/NA	Water	9040B	
720-69743-3	TS3-I-2016-1	Total/NA	Water	9040B	
LCS 720-195606/1	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 195768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69743-3	TS3-I-2016-1	Total/NA	Water	SM 2540D	
720-69743-A-1 DU	720-69743-A-1 DU	Total/NA	Water	SM 2540D	
LCS 720-195768/1	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 720-195768/2	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
MB 720-195768/3	Method Blank	Total/NA	Water	SM 2540D	

Analysis Batch: 195829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69743-1	TS1-I-2016-1	Total/NA	Water	SM 2540D	
720-69743-2	TS2-I-2016-1	Total/NA	Water	SM 2540D	
LCS 720-195829/1	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 720-195829/2	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
MB 720-195829/3	Method Blank	Total/NA	Water	SM 2540D	

Prep Batch: 320408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69743-1	TS1-I-2016-1	Total/NA	Water	1664A	
LCS 500-320408/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 500-320408/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 320412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69743-1	TS1-I-2016-1	Total/NA	Water	1664A	320408

TestAmerica Pleasanton

QC Association Summary

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69743-1

General Chemistry (Continued)

Analysis Batch: 320412 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-320408/2-A	Lab Control Sample	Total/NA	Water	1664A	320408
MB 500-320408/1-A	Method Blank	Total/NA	Water	1664A	320408

Prep Batch: 320432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69743-2	TS2-I-2016-1	Total/NA	Water	1664A	
720-69743-2 MS	TS2-I-2016-1	Total/NA	Water	1664A	
LCS 500-320432/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 500-320432/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 320434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69743-2	TS2-I-2016-1	Total/NA	Water	1664A	320432
720-69743-2 MS	TS2-I-2016-1	Total/NA	Water	1664A	320432
LCS 500-320432/2-A	Lab Control Sample	Total/NA	Water	1664A	320432
MB 500-320432/1-A	Method Blank	Total/NA	Water	1664A	320432

Prep Batch: 320710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69743-3	TS3-I-2016-1	Total/NA	Water	1664A	
LCS 500-320710/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 500-320710/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 320711

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-320710/2-A	Lab Control Sample	Total/NA	Water	1664A	320710
MB 500-320710/1-A	Method Blank	Total/NA	Water	1664A	320710

Prep Batch: 320745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 500-320745/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 500-320745/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 320882

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69743-3	TS3-I-2016-1	Total/NA	Water	1664A	320710
LCS 500-320710/2-A	Lab Control Sample	Total/NA	Water	1664A	320710
LCS 500-320745/2-A	Lab Control Sample	Total/NA	Water	1664A	320745
MB 500-320710/1-A	Method Blank	Total/NA	Water	1664A	320710
MB 500-320745/1-A	Method Blank	Total/NA	Water	1664A	320745

TestAmerica Pleasanton

Lab Chronicle

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69743-1

Client Sample ID: TS1-I-2016-1

Date Collected: 01/13/16 09:00

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69743-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			209714	01/18/16 09:32	MKN	TAL SEA
Total/NA	Analysis	200.8		1	209879	01/20/16 09:55	FCW	TAL SEA
Total/NA	Prep	1664A			320408	01/21/16 18:39	SSF	TAL CHI
Total/NA	Analysis	1664A		1	320412	01/21/16 20:06	SSF	TAL CHI
Total/NA	Analysis	9040B		1	195606	01/14/16 22:19	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	195829	01/19/16 15:23	EYT	TAL PLS

Client Sample ID: TS2-I-2016-1

Date Collected: 01/13/16 09:15

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69743-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			209714	01/18/16 09:32	MKN	TAL SEA
Total/NA	Analysis	200.8		1	209879	01/20/16 10:00	FCW	TAL SEA
Total/NA	Prep	1664A			320432	01/21/16 21:57	SSF	TAL CHI
Total/NA	Analysis	1664A		1	320434	01/21/16 23:16	SSF	TAL CHI
Total/NA	Analysis	9040B		1	195606	01/14/16 22:25	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	195829	01/19/16 15:23	EYT	TAL PLS

Client Sample ID: TS3-I-2016-1

Date Collected: 01/13/16 08:15

Date Received: 01/14/16 15:20

Lab Sample ID: 720-69743-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			209714	01/18/16 09:32	MKN	TAL SEA
Total/NA	Analysis	200.8		1	209879	01/20/16 10:04	FCW	TAL SEA
Total/NA	Prep	1664A			320710	01/25/16 15:22	SSF	TAL CHI
Total/NA	Analysis	1664A		1	320882	01/26/16 20:43	SSF	TAL CHI
Total/NA	Analysis	9040B		1	195606	01/14/16 22:28	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	195768	01/18/16 17:49	EYT	TAL PLS

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Pleasanton

Certification Summary

Client: Weiss Associates
Project/Site: LRT 2015-2016 Annual StormWater Sampling

TestAmerica Job ID: 720-69743-1

Laboratory: TestAmerica Pleasanton

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16 *
Analysis Method	Prep Method	Matrix	Analyte	

Laboratory: TestAmerica Chicago

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40461	04-30-16
California	State Program	9	2903	04-30-16
Georgia	State Program	4	N/A	04-30-16
Georgia	State Program	4	939	04-30-16
Hawaii	State Program	9	N/A	04-30-16
Illinois	NELAP	5	100201	04-30-16
Indiana	State Program	5	C-IL-02	04-30-16
Iowa	State Program	7	82	05-01-16
Kansas	NELAP	7	E-10161	01-31-16 *
Kentucky (UST)	State Program	4	66	04-30-16
Kentucky (WW)	State Program	4	KY90023	12-31-16
Massachusetts	State Program	1	M-IL035	06-30-16
Mississippi	State Program	4	N/A	04-30-16
New York	NELAP	2	IL00035	04-01-16
North Carolina (WW/SW)	State Program	4	291	12-31-16
North Dakota	State Program	8	R-194	04-30-16
Oklahoma	State Program	6	8908	08-31-16
South Carolina	State Program	4	77001	04-30-16
USDA	Federal		P330-15-00038	02-11-18
Wisconsin	State Program	5	999580010	08-31-16
Wyoming	State Program	8	8TMS-Q	04-30-16

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-16
L-A-B	DoD ELAP		L2236	01-19-19
L-A-B	ISO/IEC 17025		L2236	01-19-19
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

* Certification renewal pending - certification considered valid.

TestAmerica Pleasanton

Method Summary

Client: Weiss Associates

TestAmerica Job ID: 720-69743-1

Project/Site: LRT 2015-2016 Annual StormWater Sampling

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	TAL SEA
1664A	HEM and SGT-HEM	1664A	TAL CHI
9040B	pH	SW846	TAL PLS
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL PLS

Protocol References:

1664A = EPA-821-98-002

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Weiss Associates

TestAmerica Job ID: 720-69743-1

Project/Site: LRT 2015-2016 Annual StormWater Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-69743-1	TS1-I-2016-1	Water	01/13/16 09:00	01/14/16 15:20
720-69743-2	TS2-I-2016-1	Water	01/13/16 09:15	01/14/16 15:20
720-69743-3	TS3-I-2016-1	Water	01/13/16 08:15	01/14/16 15:20

720-69743

Chain of Custody Record

INSTRUCTIONS FOR LAB PERSONNEL:

GeoTracker EDF required? ☐ Yes ☒ No
 Equis 4-file EDWEDD required? ☒ Yes ☐ No
 Specify analytic/prep method and detection limit in report.
 Notify us of any anomalous peaks in GC or other scans
 Call immediately with any questions or problems

Please send analytic results, electronic deliverables and the original chain-of-custody form to:
 labresults@weiss.com
 ajm@weiss.com
 sab@weiss.com

Client Contact

Project Manager: Scott Bourne

Project ID: 426-202601 Task 1.1.3

Sampled by: AJM

Sample date(s): 1/13/2016

Analysis Turnaround Time:

Standard

Job Name: LRT 2015 2016 Annual Storm Water Sampling

Address: LRT 2015 2016 Annual Storm Water Sampling

402 Wright Avenue, Richmond, CA 94804

Sample Identification

Sample Date

Sample Time

Sample Matrix

of Cont

TS1-I-2016-1

1/13/2016

0900

W

5

TS2-I-2016-1

1/13/2016

0915

W

5

TS3-I-2016-1

1/13/2016

0815

W

5

Field Number (X)

1

1

1,2

1,4

720-69743 Chain of Custody

Field Number (X)

1

1

1,2

Protocol ID/path: J Leon Richmond03b_Sampling

Analyte (Method ID)

pH (EPA 9040B)

Total Suspended Solids (SM 2540D)

Oil & Grease (EPA 1664A SGT-HEM)

Total Metals- Al,Cu, Fe, Ni, Pb, Zn (EPA 200.8 ICP-MS)

COC Number:

Page 1 of 1

SDS number:

Sample Specific Notes:

1220 Quarry Lane
Pleasanton, CA 94566
Phone (925) 484-1919 Fax (925) 600-3002

1000

THE LEADER IN ENVIRONMENTAL TESTING

~~1/28/2016~~

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-69743-1

Login Number: 69743

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Bullock, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	False	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: Weiss Associates

Job Number: 720-69743-1

Login Number: 69743

List Number: 3

Creator: Scott, Sherri L

List Source: TestAmerica Chicago

List Creation: 01/18/16 07:50 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-69743-1

Login Number: 69743

List Number: 2

Creator: Luna, Francisco J

List Source: TestAmerica Seattle

List Creation: 01/16/16 01:00 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	IR2 9.2c/9.3c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



WORK ORDER NUMBER: 16-01-1628

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Weiss Associates

Client Project Name: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Attention: Greg Hulburd
2200 Powell Street
Suite 925
Emeryville, CA 94608-1879

A handwritten signature in black ink, reading "Virendra R. Patel", enclosed in a hand-drawn oval.

Approved for release on 02/02/2016 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3
 Work Order Number: 16-01-1628

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Work Order Narrative

Work Order: 16-01-1628Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/26/16. They were assigned to Work Order 16-01-1628.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



Calscience

Sample Summary

Client: Weiss Associates	Work Order: 16-01-1628
2200 Powell Street, Suite 925	Project Name: LRT 2015-2016 Annual Storm Water Sampling /
Emeryville, CA 94608-1879	426-2026.01 Task 1.1.3
	PO Number:
	Date/Time Received: 01/26/16 09:55
	Number of Containers: 3

Attn: Greg Hulburd

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TS2-I-2016-2	16-01-1628-1	01/22/16 08:54	3	Aqueous

Return to Contents



Calscience

QC Association Summary

Work Order: 16-01-1628

Page 1 of 1

<u>Client Sample ID</u>	<u>Method Name</u>	<u>Type</u>	<u>Ext Name</u>	<u>Instrument</u>	<u>MS/MSD/SDP</u>	<u>LCS/LCSD</u>
TS2-I-2016-2	EPA 8081A Organochlorine Pesticides		EPA 3510C	GC 44	*2	160127L02A
TS2-I-2016-2	EPA 8081A Organochlorine Pesticides		EPA 3510C	GC 44	*2	160127L08


Return to Contents

2 = Limited sample received, no MS/MSD performed



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/26/16
Work Order: 16-01-1628
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-I-2016-2	16-01-1628-1-A	01/22/16 08:54	Aqueous	GC 44	01/27/16	01/29/16 13:47	160127L02A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.097	0.027	1.00	
Beta-BHC	ND	0.097	0.029	1.00	
Delta-BHC	ND	0.097	0.028	1.00	
Endosulfan I	ND	0.097	0.027	1.00	
Endrin Aldehyde	ND	0.097	0.026	1.00	
Endosulfan II	ND	0.097	0.026	1.00	
Endosulfan Sulfate	ND	0.097	0.028	1.00	
Methoxychlor	ND	0.097	0.024	1.00	
Chlordane	ND	0.97	0.32	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	93	50-135	
2,4,5,6-Tetrachloro-m-Xylene	86	50-135	

Method Blank	099-12-529-868	N/A	Aqueous	GC 44	01/27/16	01/29/16 13:19	160127L02A
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	99	50-135	
2,4,5,6-Tetrachloro-m-Xylene	81	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/26/16
Work Order: 16-01-1628
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-I-2016-2	16-01-1628-1-BC	01/22/16 08:54	Aqueous	GC 44	01/27/16	01/29/16 12:07	160127L08

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
2,4'-DDD	ND	1.3	0.50	1.00	
2,4'-DDE	ND	1.3	0.50	1.00	
2,4'-DDT	ND	2.0	0.99	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	105	50-150	
2,4,5,6-Tetrachloro-m-Xylene	107	50-150	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/26/16
Work Order: 16-01-1628
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-704-7	N/A	Aqueous	GC 44	01/27/16	01/29/16 11:53	160127L08

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
2,4'-DDD	ND	1.3	0.50	1.00	
2,4'-DDE	ND	1.3	0.50	1.00	
2,4'-DDT	ND	2.0	1.0	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	69	50-150	
2,4,5,6-Tetrachloro-m-Xylene	74	50-150	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/26/16
Work Order: 16-01-1628
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-529-868	LCS	Aqueous	GC 44	01/27/16	01/29/16 12:50	160127L02A
099-12-529-868	LCSD	Aqueous	GC 44	01/27/16	01/29/16 13:05	160127L02A

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.4660	93	0.4657	93	50-135	36-149	0	0-25	
Gamma-BHC	0.5000	0.4757	95	0.4732	95	50-135	36-149	1	0-25	
Beta-BHC	0.5000	0.4869	97	0.4688	94	50-135	36-149	4	0-25	
Heptachlor	0.5000	0.4178	84	0.4297	86	50-135	36-149	3	0-25	
Delta-BHC	0.5000	0.4996	100	0.4706	94	50-135	36-149	6	0-25	
Aldrin	0.5000	0.3733	75	0.3953	79	50-135	36-149	6	0-25	
Heptachlor Epoxide	0.5000	0.4271	85	0.4271	85	50-135	36-149	0	0-25	
Endosulfan I	0.5000	0.4671	93	0.4775	96	50-135	36-149	2	0-25	
Dieldrin	0.5000	0.4756	95	0.4794	96	50-135	36-149	1	0-25	
4,4'-DDE	0.5000	0.4802	96	0.4669	93	50-135	36-149	3	0-25	
Endrin	0.5000	0.5233	105	0.5158	103	50-135	36-149	1	0-25	
Endrin Aldehyde	0.5000	0.5208	104	0.4543	91	50-135	36-149	14	0-25	
4,4'-DDD	0.5000	0.4753	95	0.4657	93	50-135	36-149	2	0-25	
Endosulfan II	0.5000	0.5801	116	0.5898	118	50-135	36-149	2	0-25	
4,4'-DDT	0.5000	0.4851	97	0.4719	94	50-135	36-149	3	0-25	
Endosulfan Sulfate	0.5000	0.4578	92	0.4583	92	50-135	36-149	0	0-25	
Methoxychlor	0.5000	0.4891	98	0.4734	95	50-135	36-149	3	0-25	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/26/16
Work Order: 16-01-1628
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 2 of 2

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-704-7	LCS	Aqueous		GC 44	01/27/16	01/29/16 11:25	160127L08			
099-16-704-7	LCSD	Aqueous		GC 44	01/27/16	01/29/16 11:39	160127L08			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	33.35	24.52	74	22.62	68	50-150	33-167	8	0-25	
4,4'-DDD	33.35	24.73	74	23.97	72	50-150	33-167	3	0-25	
4,4'-DDE	33.35	27.21	82	26.35	79	50-150	33-167	3	0-25	
4,4'-DDT	33.35	26.18	78	25.07	75	50-150	33-167	4	0-25	
Alpha Chlordane	33.35	24.21	73	22.79	68	50-150	33-167	6	0-25	
Dieldrin	33.35	26.15	78	23.42	70	50-150	33-167	11	0-25	
Gamma Chlordane	33.35	23.80	71	22.66	68	50-150	33-167	5	0-25	
Endrin	33.35	27.44	82	26.49	79	50-150	33-167	4	0-25	
Gamma-BHC	33.35	25.03	75	22.89	69	50-150	33-167	9	0-25	
Heptachlor	33.35	25.93	78	23.67	71	50-150	33-167	9	0-25	
Heptachlor Epoxide	33.35	22.35	67	21.33	64	50-150	33-167	5	0-25	

Total number of LCS compounds: 11

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Sample Analysis Summary Report

Work Order: 16-01-1628

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8081A	EPA 3510C	669	GC 44	1


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Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 16-01-1628

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Chain of Custody Record

CalSciencE Environmental Lab
5063 Commercial Circle, Suite H
Concord, CA 94520
Phone: 925-689-9022

Please send analytic results, electronic deliverables and the original chain-of-custody form to:

labresults@weiss.com
 ajm@weiss.com
 sab@weiss.com

INSTRUCTIONS FOR LAB PERSONNEL:

GeoTracker EDF required? ☐ Yes ☒ No
 Equis 4-file EDWEDD required? ☒ Yes ☐ No

Specify analytic/prep method and detection limit in report.
 Notify us of any anomalous peaks in GC or other scans.
 Call immediately with any questions or problems.

16-01-1628

[illegible]

~~Box~~ = Samples released to a secured, locked area.

● = Samples received from a secured, locked area



800-322-5555 www.gso.com

(1628)

Ship From

CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Tracking #: 530690290

NPS



Ship To

CEL
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

ORC
GARDEN GROVE

A

COD: \$0.00

Weight: 0 lb(s)

Reference:

HALEY & ALDRICH, WEISS

Delivery Instructions:

D92845A



47463570

Signature Type: REQUIRED

Print Date: 1/25/2016 3:56 PM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

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SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Weiss Assoc.

DATE: 01 / 26 / 2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC4B (CF: +0.3°C); Temperature (w/o CF): 1.6 °C (w/ CF): 1.9 °C; ☒ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter

Checked by: 836

CUSTODY SEAL:

Cooler ☒ Present and Intact

☐ Present but Not Intact

☐ Not Present

☐ N/A

Checked by: 836

Sample(s) ☐ Present and Intact

☐ Present but Not Intact

☒ Not Present

☐ N/A

Checked by: 1058

SAMPLE CONDITION:

Chain-of-Custody (COC) document(s) received with samples ☒ Yes ☐ No ☐ N/A

COC document(s) received complete ☒ Yes ☐ No ☐ N/A

☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers

☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time

Sampler's name indicated on COC ☒ Yes ☐ No ☐ N/A

Sample container label(s) consistent with COC ☒ Yes ☐ No ☐ N/A

Sample container(s) intact and in good condition ☒ Yes ☐ No ☐ N/A

Proper containers for analyses requested ☒ Yes ☐ No ☐ N/A

Sufficient volume/mass for analyses requested ☒ Yes ☐ No ☐ N/A

Samples received within holding time ☒ Yes ☐ No ☐ N/A

Aqueous samples for certain analyses received within 15-minute holding time

☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen ☐ Yes ☐ No ☒ N/A

Proper preservation chemical(s) noted on COC and/or sample container ☒ Yes ☐ No ☐ N/A

Unpreserved aqueous sample(s) received for certain analyses

☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals

Container(s) for certain analysis free of headspace ☐ Yes ☐ No ☒ N/A

☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)

☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation ☐ Yes ☐ No ☒ N/A

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA_h ☐ VOA_{na} ☐ 100PJ ☐ 100PJ_{na} ☐ 125AGB ☐ 125AGB_h ☐ 125AGB_p ☐ 125PB

☐ 125PB_{znna} ☐ 250AGB ☐ 250CGB ☐ 250CGB_s ☐ 250PB ☐ 250PB_n ☐ 500AGB ☐ 500AGJ ☐ 500AGJ_s
☐ 500PB ☒ 1AGB ☐ 1AGB_{na} ☐ 1AGB_s ☐ 1PB ☐ 1PB_{na} ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ Other Matrix (_____) ☐ _____ ☐ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1058

s = H₂SO₄, u = ultra-pure, znna = Zn(CH₃CO₂)₂ + NaOH

Reviewed by: 778



WORK ORDER NUMBER: 16-01-1629

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Weiss Associates

Client Project Name: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Attention: Scott Bourne
2200 Powell Street
Suite 925
Emeryville, CA 94608-1879

A handwritten signature in black ink, reading "Virendra Patel", enclosed in a hand-drawn oval.

Approved for release on 02/02/2016 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3
 Work Order Number: 16-01-1629

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Work Order Narrative

Work Order: 16-01-1629Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 01/26/16. They were assigned to Work Order 16-01-1629.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



Calscience

Sample Summary

Client: Weiss Associates	Work Order: 16-01-1629
2200 Powell Street, Suite 925	Project Name: LRT 2015-2016 Annual Storm Water Sampling /
Emeryville, CA 94608-1879	426-2026.01 Task 1.1.3
	PO Number:
	Date/Time Received: 01/26/16 09:55
	Number of Containers: 5

Attn: Scott Bourne

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TS2-E-2016-2	16-01-1629-1	01/22/16 09:10	2	Aqueous
FD-2016-2	16-01-1629-2	01/22/16 09:15	3	Aqueous


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Calscience

QC Association Summary

Work Order: 16-01-1629

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<u>Client Sample ID</u>	<u>Method Name</u>	<u>Type</u>	<u>Ext Name</u>	<u>Instrument</u>	<u>MS/MSD/SDP</u>	<u>LCS/LCSD</u>
TS2-E-2016-2	EPA 8081A Organochlorine Pesticides		EPA 3510C	GC 44	*4	160127L02A
TS2-E-2016-2	EPA 8081A Organochlorine Pesticides		EPA 3510C	GC 44	*4	160127L08
FD-2016-2	EPA 8081A Organochlorine Pesticides		EPA 3510C	GC 44	*4	160127L02A
FD-2016-2	EPA 8081A Organochlorine Pesticides		EPA 3510C	GC 44	*4	160127L08


Return to Contents

4 = Per the method, no associated matrix QC



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/26/16
Work Order: 16-01-1629
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-E-2016-2	16-01-1629-1-A	01/22/16 09:10	Aqueous	GC 44	01/27/16	01/29/16 14:02	160127L02A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	99	50-135	
2,4,5,6-Tetrachloro-m-Xylene	89	50-135	

FD-2016-2	16-01-1629-2-A	01/22/16 09:15	Aqueous	GC 44	01/27/16	01/29/16 14:16	160127L02A
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.029	1.00	
Beta-BHC	ND	0.10	0.031	1.00	
Delta-BHC	ND	0.10	0.030	1.00	
Endosulfan I	ND	0.10	0.029	1.00	
Endrin Aldehyde	ND	0.10	0.028	1.00	
Endosulfan II	ND	0.10	0.028	1.00	
Endosulfan Sulfate	ND	0.10	0.030	1.00	
Methoxychlor	ND	0.10	0.026	1.00	
Chlordane	ND	1.0	0.34	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	87	50-135	
2,4,5,6-Tetrachloro-m-Xylene	80	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/26/16
Work Order: 16-01-1629
Preparation: EPA 3510C
Method: EPA 8081A
Units: ug/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-529-868	N/A	Aqueous	GC 44	01/27/16	01/29/16 13:19	160127L02A

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1.00	
Beta-BHC	ND	0.10	0.030	1.00	
Delta-BHC	ND	0.10	0.029	1.00	
Endosulfan I	ND	0.10	0.028	1.00	
Endrin Aldehyde	ND	0.10	0.026	1.00	
Endosulfan II	ND	0.10	0.027	1.00	
Endosulfan Sulfate	ND	0.10	0.029	1.00	
Methoxychlor	ND	0.10	0.025	1.00	
Chlordane	ND	1.0	0.33	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	99	50-135	
2,4,5,6-Tetrachloro-m-Xylene	81	50-135	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/26/16
Work Order: 16-01-1629
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TS2-E-2016-2	16-01-1629-1-AB	01/22/16 09:10	Aqueous	GC 44	01/27/16	01/29/16 12:22	160127L08

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
2,4'-DDD	ND	1.3	0.50	1.00	
2,4'-DDE	ND	1.3	0.50	1.00	
2,4'-DDT	ND	2.0	1.0	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	115	50-150	
2,4,5,6-Tetrachloro-m-Xylene	100	50-150	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/26/16
Work Order: 16-01-1629
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
FD-2016-2	16-01-1629-2-AB	01/22/16 09:15	Aqueous	GC 44	01/27/16	01/29/16 12:36	160127L08

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
2,4'-DDD	ND	1.3	0.49	0.993	
2,4'-DDE	ND	1.3	0.49	0.993	
2,4'-DDT	ND	2.0	0.99	0.993	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	102	50-150	
2,4,5,6-Tetrachloro-m-Xylene	89	50-150	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/26/16
Work Order: 16-01-1629
Preparation: EPA 3510C
Method: EPA 8081A
Units: ng/L

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-704-7	N/A	Aqueous	GC 44	01/27/16	01/29/16 11:53	160127L08

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Aldrin	ND	1.3	0.50	1.00	
2,4'-DDD	ND	1.3	0.50	1.00	
2,4'-DDE	ND	1.3	0.50	1.00	
2,4'-DDT	ND	2.0	1.0	1.00	
4,4'-DDD	ND	1.3	0.50	1.00	
4,4'-DDE	ND	1.3	0.50	1.00	
4,4'-DDT	ND	1.3	0.50	1.00	
Alpha Chlordane	ND	3.3	1.7	1.00	
Dieldrin	ND	1.3	0.50	1.00	
Gamma Chlordane	ND	3.3	1.7	1.00	
Toxaphene	ND	50	25	1.00	
Endrin	ND	1.3	0.50	1.00	
Gamma-BHC	ND	1.3	0.50	1.00	
Heptachlor	ND	1.3	0.50	1.00	
Heptachlor Epoxide	ND	1.3	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	69	50-150	
2,4,5,6-Tetrachloro-m-Xylene	74	50-150	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/26/16
Work Order: 16-01-1629
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-529-868	LCS	Aqueous	GC 44	01/27/16	01/29/16 12:50	160127L02A
099-12-529-868	LCSD	Aqueous	GC 44	01/27/16	01/29/16 13:05	160127L02A

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.4660	93	0.4657	93	50-135	36-149	0	0-25	
Gamma-BHC	0.5000	0.4757	95	0.4732	95	50-135	36-149	1	0-25	
Beta-BHC	0.5000	0.4869	97	0.4688	94	50-135	36-149	4	0-25	
Heptachlor	0.5000	0.4178	84	0.4297	86	50-135	36-149	3	0-25	
Delta-BHC	0.5000	0.4996	100	0.4706	94	50-135	36-149	6	0-25	
Aldrin	0.5000	0.3733	75	0.3953	79	50-135	36-149	6	0-25	
Heptachlor Epoxide	0.5000	0.4271	85	0.4271	85	50-135	36-149	0	0-25	
Endosulfan I	0.5000	0.4671	93	0.4775	96	50-135	36-149	2	0-25	
Dieldrin	0.5000	0.4756	95	0.4794	96	50-135	36-149	1	0-25	
4,4'-DDE	0.5000	0.4802	96	0.4669	93	50-135	36-149	3	0-25	
Endrin	0.5000	0.5233	105	0.5158	103	50-135	36-149	1	0-25	
Endrin Aldehyde	0.5000	0.5208	104	0.4543	91	50-135	36-149	14	0-25	
4,4'-DDD	0.5000	0.4753	95	0.4657	93	50-135	36-149	2	0-25	
Endosulfan II	0.5000	0.5801	116	0.5898	118	50-135	36-149	2	0-25	
4,4'-DDT	0.5000	0.4851	97	0.4719	94	50-135	36-149	3	0-25	
Endosulfan Sulfate	0.5000	0.4578	92	0.4583	92	50-135	36-149	0	0-25	
Methoxychlor	0.5000	0.4891	98	0.4734	95	50-135	36-149	3	0-25	

Total number of LCS compounds: 17

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, CA 94608-1879

Date Received: 01/26/16
Work Order: 16-01-1629
Preparation: EPA 3510C
Method: EPA 8081A

Project: LRT 2015-2016 Annual Storm Water Sampling / 426-2026.01 Task 1.1.3

Page 2 of 2

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-16-704-7	LCS	Aqueous		GC 44	01/27/16	01/29/16 11:25	160127L08			
099-16-704-7	LCSD	Aqueous		GC 44	01/27/16	01/29/16 11:39	160127L08			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	33.35	24.52	74	22.62	68	50-150	33-167	8	0-25	
4,4'-DDD	33.35	24.73	74	23.97	72	50-150	33-167	3	0-25	
4,4'-DDE	33.35	27.21	82	26.35	79	50-150	33-167	3	0-25	
4,4'-DDT	33.35	26.18	78	25.07	75	50-150	33-167	4	0-25	
Alpha Chlordane	33.35	24.21	73	22.79	68	50-150	33-167	6	0-25	
Dieldrin	33.35	26.15	78	23.42	70	50-150	33-167	11	0-25	
Gamma Chlordane	33.35	23.80	71	22.66	68	50-150	33-167	5	0-25	
Endrin	33.35	27.44	82	26.49	79	50-150	33-167	4	0-25	
Gamma-BHC	33.35	25.03	75	22.89	69	50-150	33-167	9	0-25	
Heptachlor	33.35	25.93	78	23.67	71	50-150	33-167	9	0-25	
Heptachlor Epoxide	33.35	22.35	67	21.33	64	50-150	33-167	5	0-25	

Total number of LCS compounds: 11

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Sample Analysis Summary Report

Work Order: 16-01-1629

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8081A	EPA 3510C	669	GC 44	1


Return to Contents

Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 16-01-1629

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDS or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Revised COC received from Andrew Miller (Weiss) on 01/26/16 at 15:54pm - Virendra (ECI)

Chain of Custody Record

CalSciene Environmental Lab
5063 Commercial Circle, Suite H
Concord, CA 94520
Phone: 925-689-9022

Please send analytic results, electronic deliverables and the original Chain-of-Custody form to:
labresults@weiss.com
ajm@weiss.com
sab@weiss.com

INSTRUCTIONS FOR LAB PERSONNEL:

GeoTracker EDF required? ☐ Yes ☒ No
Equis 4-file EDWEDD required? ☒ Yes ☐ No
Specify analytic/prep method and detection limit in report.
Notify us of any anomalous peaks in GC or other scans.
Call immediately with any questions or problems.

16-01-1629

Client Contact		Project Manager: Scott Bourne		Protocol ID/path: J:\Levin Richmond\03b_Sampling		COC Number:	
Weiss Associates		Project ID: 426-2026.01 Task 1.1.3				Page 1 of 1	
2200 Powell Street, Suite 925		Sampled by: AJM				SID# number:	
Emeryville, CA 94608		Sample date(s): 1/22/16				Sample Specific Notes:	
(510) 450-6000 Phone		Analysis Turnaround Time:				SEE COMMENTS	
(510) 547-5043 FAX		Standard				SEE COMMENTS	
Job Name: LRT 2015-2016 Annual Storm Water Sampling		(Specify Days or Hours)					
Address: Levia Richmond Terminal, 402 Wright Avenue, Richmond, CA 94804							
Lab ID	Sample Identification	Sample Date	Sample Time	Sample Matrix	# of Cont.	Analyte (Method ID)	Pesticides (EPA 8081A)
(1)	T32-E-2016-2	1/22/16	0910	W	32		X
(2)	FD-2016-2	1/22/16	0915	W	3		X
Field Filtered (X)							
Preservation Used: 1= Ice, 2= HCl; 3= H ₂ SO ₄ ; 4=HNO ₃ ; 5=NaOH; 6= Other							
Special Instructions/OC Requirements & Comments: Level II Report. Report with reporting limit and method detection limit. Please use agreed upon analytical methods for lowest detection limits (standard 8081A and low-level 8081A for each sample). * T32-E-2016-2, UNIDENTIFIED SAMPLES, PREPARED USING 0.5L TO 5 mL * AM							
- Use ECI #TC 5158 - report Alpha-BHC, Beta-BHC, Chlordane, Delta-BHC, Endosulfan I, Endosulfan II, Endosulfan Sulfate, Endrin Aldohyde and Methoxychlor.							
- Use ECI #TC 6996 - report 2,4'-DDD, 2,4'-DDE, 2,4'-DDT, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, Aldrin, Alpha Chlordane, Dieldrin, Endrin, Gamma Chlordane, Gamma-BHC, Heptachlor Epoxide and Toxaphene							
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:		
<i>[Signature]</i>	WEISS	1/22/16 1430	<i>[Signature]</i>	WEISS	1/22/16 1430		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:		
<i>[Signature]</i>	WEISS	1/25/16 1035	<i>[Signature]</i>	ECI	1/25/16 1035		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:		
<i>[Signature]</i>	ECI	1/26/16 1730	<i>[Signature]</i>	ECI	1/26/16 1730		

• Samples received from a secured, locked area

Chain of Custody Record

CalSciene Environmental Lab
5063 Commercial Circle, Suite H
Concord, CA 94520
Phone: 925-689-9022

Please send analytic results, electronic deliverables and the original chain-of-custody form to:

labresults@weiss.com
ajm@weiss.com
sab@weiss.com

INSTRUCTIONS FOR LAB PERSONNEL:

GeoTracker EDF required? ☐ Yes ☒ No
 Equis 4-file EDWEDD required? ☒ Yes ☐ No

Specify analytic/prep method and detection limit in report.
 Notify us of any anomalous peaks in GC or other scans.
 Call immediately with any questions or problems.

16-01-1629

[illegible]

[X] = Samples released to a secured, locked area.

● = Samples received from a secured, locked area



800-322-5555 www.gso.com

Ship From

CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Tracking #: 530690290



(1629) NPS

Ship To

CEL
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

ORC
GARDEN GROVE

A

COD: \$0.00

Weight: 0 lb(s)

Reference:

HALEY & ALDRICH, WEISS

Delivery Instructions:

D92845A



47463570

Signature Type: REQUIRED

Print Date: 1/25/2016 3:56 PM

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.



SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Weiss Assoc-

DATE: 01 / 26 / 2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC4B (CF: +0.3°C); Temperature (w/o CF): 1.6 °C (w/ CF): 1.9 °C; ☒ Blank ☐ Sample☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling☐ Sample(s) received at ambient temperature; placed on ice for transport by courierAmbient Temperature: ☐ Air ☐ Filter

Checked by: 836

CUSTODY SEAL:

Cooler ☒ Present and Intact☐ Present but Not Intact☐ Not Present☐ N/A

Checked by: 836

Sample(s) ☐ Present and Intact☐ Present but Not Intact☒ Not Present☐ N/A

Checked by: 1058

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers <input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Container(s) for certain analysis free of headspace	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA_h ☐ VOA_{na2} ☐ 100PJ ☐ 100PJ_{na2} ☐ 125AGB ☐ 125AGB_h ☐ 125AGB_p ☐ 125PB☐ 125PB_{znna} ☐ 250AGB ☐ 250CGB ☐ 250CGB_s ☐ 250PB ☐ 250PB_n ☐ 500AGB ☐ 500AGJ ☐ 500AGJ_s☐ 500PB ☒ 1AGB ☐ 1AGB_{na2} ☐ 1AGB_s ☐ 1PB ☐ 1PB_{na} ☐ _____ ☐ _____ ☐ _____Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (____) ☐ EnCores® (____) ☐ TerraCores® (____) ☐ _____Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ Other Matrix (____): ☐ _____ ☐ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1058s = H₂SO₄, u = ultra-pure, znna = Zn(CH₃CO₂)₂ + NaOH

Reviewed by: 778

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925)484-1919

TestAmerica Job ID: 720-69924-1

Client Project/Site: LRTC Stormwater

For:

Weiss Associates

2200 Powell Street

Suite 925

Emeryville, California 94608

Attn: Mr. Scott Bourne



Authorized for release by:

2/5/2016 1:27:52 PM

Micah Smith, Project Manager II

(925)484-1919

micah.smith@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Job ID: 720-69924-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative 720-69924-1

Comments

No additional comments.

Receipt

The samples were received on 1/22/2016 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.4° C and 3.3° C.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method(s) 1664A: Analysis for Hexane Extractable Material (HEM) was performed for the following samples: TS1-E-2016-2 (720-69924-1), TS2-E-2016-2 (720-69924-2), FD-2016-2 (720-69924-3), TS3-E-2016-2 (720-69924-4) and SW-11-2016-2 (720-69924-5). Since the HEM result(s) was below the reporting limit (RL), the result(s) for Silica Gel Treated - Hexane Extractable Material (SGT-HEM) was reported as a non-detect. All HEM quality control criteria were met.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Client Sample ID: TS1-E-2016-2

Lab Sample ID: 720-69924-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.0072	B	0.0020	0.00060	mg/L	1		200.8	Total/NA
Iron	0.021	J	0.040	0.0058	mg/L	1		200.8	Total/NA
Lead	0.0024		0.00040	0.000034	mg/L	1		200.8	Total/NA
Zinc	0.049		0.0070	0.0019	mg/L	1		200.8	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.23		0.100	0.100	SU	1		9040B	Total/NA

Client Sample ID: TS2-E-2016-2

Lab Sample ID: 720-69924-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.0037	B	0.0020	0.00060	mg/L	1		200.8	Total/NA
Iron	0.034	J	0.040	0.0058	mg/L	1		200.8	Total/NA
Nickel	0.00089	J	0.0030	0.00040	mg/L	1		200.8	Total/NA
Lead	0.00050		0.00040	0.000034	mg/L	1		200.8	Total/NA
Zinc	0.057		0.0070	0.0019	mg/L	1		200.8	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.77		0.100	0.100	SU	1		9040B	Total/NA

Client Sample ID: FD-2016-2

Lab Sample ID: 720-69924-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.0093	B	0.0020	0.00060	mg/L	1		200.8	Total/NA
Iron	0.068		0.040	0.0058	mg/L	1		200.8	Total/NA
Nickel	0.00099	J	0.0030	0.00040	mg/L	1		200.8	Total/NA
Lead	0.00099		0.00040	0.000034	mg/L	1		200.8	Total/NA
Zinc	0.061		0.0070	0.0019	mg/L	1		200.8	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.77		0.100	0.100	SU	1		9040B	Total/NA

Client Sample ID: TS3-E-2016-2

Lab Sample ID: 720-69924-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.0020	B	0.0020	0.00060	mg/L	1		200.8	Total/NA
Iron	0.016	J	0.040	0.0058	mg/L	1		200.8	Total/NA
Nickel	0.0013	J	0.0030	0.00040	mg/L	1		200.8	Total/NA
Lead	0.00054		0.00040	0.000034	mg/L	1		200.8	Total/NA
Zinc	0.067		0.0070	0.0019	mg/L	1		200.8	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.87		0.100	0.100	SU	1		9040B	Total/NA

Client Sample ID: SW-11-2016-2

Lab Sample ID: 720-69924-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	0.18		0.10	0.10	mg/L	1		200.8	Total/NA
Copper	0.0035	B	0.0020	0.00060	mg/L	1		200.8	Total/NA
Iron	0.20		0.040	0.0058	mg/L	1		200.8	Total/NA
Nickel	0.00088	J	0.0030	0.00040	mg/L	1		200.8	Total/NA
Lead	0.0029		0.00040	0.000034	mg/L	1		200.8	Total/NA
Zinc	0.031		0.0070	0.0019	mg/L	1		200.8	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Detection Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Client Sample ID: SW-11-2016-2 (Continued)

Lab Sample ID: 720-69924-5

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.99		0.100	0.100	SU	1		9040B	Total/NA
Total Suspended Solids	3.5		1.0	1.0	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Client Sample ID: TS1-E-2016-2

Date Collected: 01/22/16 08:20

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69924-1

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		01/26/16 13:03	01/27/16 19:38	1
Copper	0.0072	B	0.0020	0.00060	mg/L		01/26/16 13:03	01/27/16 19:38	1
Iron	0.021	J	0.040	0.0058	mg/L		01/26/16 13:03	01/27/16 19:38	1
Nickel	<0.00040		0.0030	0.00040	mg/L		01/26/16 13:03	01/27/16 19:38	1
Lead	0.0024		0.00040	0.000034	mg/L		01/26/16 13:03	01/27/16 19:38	1
Zinc	0.049		0.0070	0.0019	mg/L		01/26/16 13:03	01/27/16 19:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	<1.4		3.9	1.4	mg/L		02/03/16 10:15	02/03/16 10:15	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.23		0.100	0.100	SU			01/22/16 20:26	1
Total Suspended Solids	<1.0		1.0	1.0	mg/L			01/26/16 20:51	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Client Sample ID: TS2-E-2016-2

Date Collected: 01/22/16 09:10

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69924-2

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		01/26/16 13:03	01/27/16 20:19	1
Copper	0.0037	B	0.0020	0.00060	mg/L		01/26/16 13:03	01/27/16 20:19	1
Iron	0.034	J	0.040	0.0058	mg/L		01/26/16 13:03	01/27/16 20:19	1
Nickel	0.00089	J	0.0030	0.00040	mg/L		01/26/16 13:03	01/27/16 20:19	1
Lead	0.00050		0.00040	0.000034	mg/L		01/26/16 13:03	01/27/16 20:19	1
Zinc	0.057		0.0070	0.0019	mg/L		01/26/16 13:03	01/27/16 20:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	<1.4		4.0	1.4	mg/L		02/03/16 10:15	02/03/16 10:15	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.77		0.100	0.100	SU			01/22/16 20:38	1
Total Suspended Solids	<1.0		1.0	1.0	mg/L			01/26/16 20:51	1

Client Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Client Sample ID: FD-2016-2

Date Collected: 01/22/16 09:15

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69924-3

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		01/26/16 13:03	01/27/16 20:23	1
Copper	0.0093	B	0.0020	0.00060	mg/L		01/26/16 13:03	01/27/16 20:23	1
Iron	0.068		0.040	0.0058	mg/L		01/26/16 13:03	01/27/16 20:23	1
Nickel	0.00099	J	0.0030	0.00040	mg/L		01/26/16 13:03	01/27/16 20:23	1
Lead	0.00099		0.00040	0.000034	mg/L		01/26/16 13:03	01/27/16 20:23	1
Zinc	0.061		0.0070	0.0019	mg/L		01/26/16 13:03	01/27/16 20:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	<1.4		3.9	1.4	mg/L		02/03/16 10:15	02/03/16 10:15	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.77		0.100	0.100	SU			01/22/16 20:41	1
Total Suspended Solids	<1.0		1.0	1.0	mg/L			01/26/16 20:51	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Client Sample ID: TS3-E-2016-2

Date Collected: 01/22/16 08:30

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69924-4

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		01/26/16 13:03	01/27/16 20:28	1
Copper	0.0020	B	0.0020	0.00060	mg/L		01/26/16 13:03	01/27/16 20:28	1
Iron	0.016	J	0.040	0.0058	mg/L		01/26/16 13:03	01/27/16 20:28	1
Nickel	0.0013	J	0.0030	0.00040	mg/L		01/26/16 13:03	01/27/16 20:28	1
Lead	0.00054		0.00040	0.000034	mg/L		01/26/16 13:03	01/27/16 20:28	1
Zinc	0.067		0.0070	0.0019	mg/L		01/26/16 13:03	01/27/16 20:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	<1.4		3.9	1.4	mg/L		02/03/16 10:15	02/03/16 10:15	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.87		0.100	0.100	SU			01/22/16 20:44	1
Total Suspended Solids	<1.0		1.0	1.0	mg/L			01/26/16 20:51	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Client Sample ID: SW-11-2016-2

Date Collected: 01/22/16 07:44

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69924-5

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.18		0.10	0.10	mg/L		01/26/16 13:03	01/27/16 20:33	1
Copper	0.0035	B	0.0020	0.00060	mg/L		01/26/16 13:03	01/27/16 20:33	1
Iron	0.20		0.040	0.0058	mg/L		01/26/16 13:03	01/27/16 20:33	1
Nickel	0.00088	J	0.0030	0.00040	mg/L		01/26/16 13:03	01/27/16 20:33	1
Lead	0.0029		0.00040	0.000034	mg/L		01/26/16 13:03	01/27/16 20:33	1
Zinc	0.031		0.0070	0.0019	mg/L		01/26/16 13:03	01/27/16 20:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	<1.4		3.9	1.4	mg/L		02/03/16 10:15	02/03/16 10:15	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.99		0.100	0.100	SU			01/22/16 21:10	1
Total Suspended Solids	3.5		1.0	1.0	mg/L			01/26/16 20:51	1

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-210227/14-A

Matrix: Water

Analysis Batch: 210461

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 210227

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		01/26/16 13:03	01/27/16 19:29	1
Copper	0.00127	J	0.0020	0.00060	mg/L		01/26/16 13:03	01/27/16 19:29	1
Iron	<0.0058		0.040	0.0058	mg/L		01/26/16 13:03	01/27/16 19:29	1
Nickel	<0.00040		0.0030	0.00040	mg/L		01/26/16 13:03	01/27/16 19:29	1
Lead	<0.000034		0.00040	0.000034	mg/L		01/26/16 13:03	01/27/16 19:29	1
Zinc	<0.0019		0.0070	0.0019	mg/L		01/26/16 13:03	01/27/16 19:29	1

Lab Sample ID: LCS 580-210227/15-A

Matrix: Water

Analysis Batch: 210461

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 210227

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	1.00	0.923		mg/L		92	85 - 115
Copper	0.100	0.0960		mg/L		96	85 - 115
Iron	10.0	9.69		mg/L		97	85 - 115
Nickel	0.100	0.0948		mg/L		95	85 - 115
Lead	0.100	0.0945		mg/L		95	85 - 115
Zinc	0.100	0.0991		mg/L		99	85 - 115

Lab Sample ID: LCSD 580-210227/16-A

Matrix: Water

Analysis Batch: 210461

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 210227

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	1.00	0.923		mg/L		92	85 - 115	0	20
Copper	0.100	0.0944		mg/L		94	85 - 115	2	20
Iron	10.0	9.56		mg/L		96	85 - 115	1	20
Nickel	0.100	0.0929		mg/L		93	85 - 115	2	20
Lead	0.100	0.0941		mg/L		94	85 - 115	0	20
Zinc	0.100	0.0969		mg/L		97	85 - 115	2	20

Lab Sample ID: 720-69924-1 MS

Matrix: Water

Analysis Batch: 210461

Client Sample ID: TS1-E-2016-2

Prep Type: Total/NA

Prep Batch: 210227

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	<0.10		1.00	0.896		mg/L		90	70 - 130
Copper	0.0072	B	0.100	0.0956		mg/L		88	70 - 130
Iron	0.021	J	10.0	9.09		mg/L		91	70 - 130
Nickel	<0.00040		0.100	0.0892		mg/L		89	70 - 130
Lead	0.0024		0.100	0.0951		mg/L		93	70 - 130
Zinc	0.049		0.100	0.138		mg/L		89	70 - 130

Lab Sample ID: 720-69924-1 MSD

Matrix: Water

Analysis Batch: 210461

Client Sample ID: TS1-E-2016-2

Prep Type: Total/NA

Prep Batch: 210227

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	<0.10		1.00	0.923		mg/L		92	70 - 130	3	20

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 720-69924-1 MSD

Matrix: Water

Analysis Batch: 210461

Client Sample ID: TS1-E-2016-2

Prep Type: Total/NA

Prep Batch: 210227

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Copper	0.0072	B	0.100	0.0978		mg/L		91	70 - 130	2	20
Iron	0.021	J	10.0	9.41		mg/L		94	70 - 130	4	20
Nickel	<0.00040		0.100	0.0916		mg/L		92	70 - 130	3	20
Lead	0.0024		0.100	0.0984		mg/L		96	70 - 130	3	20
Zinc	0.049		0.100	0.138		mg/L		89	70 - 130	1	20

Lab Sample ID: 720-69924-1 DU

Matrix: Water

Analysis Batch: 210461

Client Sample ID: TS1-E-2016-2

Prep Type: Total/NA

Prep Batch: 210227

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Aluminum	<0.10		<0.10		mg/L		NC	20
Copper	0.0072	B	0.00708		mg/L		2	20
Iron	0.021	J	0.0348	J F5	mg/L		49	20
Nickel	<0.00040		0.000434	J	mg/L		NC	20
Lead	0.0024		0.00238		mg/L		0.08	20
Zinc	0.049		0.0489		mg/L		0.06	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 490-316617/1-A

Matrix: Water

Analysis Batch: 316633

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 316617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	<1.4		4.0	1.4	mg/L		02/03/16 10:15	02/03/16 10:15	1

Lab Sample ID: LCS 490-316617/2-A

Matrix: Water

Analysis Batch: 316633

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 316617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
SGT-HEM	20.8	17.1		mg/L		82	64 - 132

Lab Sample ID: 720-69924-1 MS

Matrix: Water

Analysis Batch: 316633

Client Sample ID: TS1-E-2016-2

Prep Type: Total/NA

Prep Batch: 316617

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
SGT-HEM	<1.4		20.4	16.9		mg/L		83	64 - 132

Method: 9040B - pH

Lab Sample ID: LCS 720-196100/1

Matrix: Water

Analysis Batch: 196100

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
pH	7.00	6.900		SU		99	99 - 101

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 720-196321/3

Matrix: Water

Analysis Batch: 196321

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.0		1.0	1.0	mg/L	-		01/26/16 20:51	1

Lab Sample ID: LCS 720-196321/1

Matrix: Water

Analysis Batch: 196321

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	500	413		mg/L	-	83	69 - 117

Lab Sample ID: LCSD 720-196321/2

Matrix: Water

Analysis Batch: 196321

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	500	440		mg/L	-	88	69 - 117	6	20

TestAmerica Pleasanton

QC Association Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Metals

Prep Batch: 210227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69924-1	TS1-E-2016-2	Total/NA	Water	200.8	
720-69924-1 DU	TS1-E-2016-2	Total/NA	Water	200.8	
720-69924-1 MS	TS1-E-2016-2	Total/NA	Water	200.8	
720-69924-1 MSD	TS1-E-2016-2	Total/NA	Water	200.8	
720-69924-2	TS2-E-2016-2	Total/NA	Water	200.8	
720-69924-3	FD-2016-2	Total/NA	Water	200.8	
720-69924-4	TS3-E-2016-2	Total/NA	Water	200.8	
720-69924-5	SW-11-2016-2	Total/NA	Water	200.8	
LCS 580-210227/15-A	Lab Control Sample	Total/NA	Water	200.8	
LCSD 580-210227/16-A	Lab Control Sample Dup	Total/NA	Water	200.8	
MB 580-210227/14-A	Method Blank	Total/NA	Water	200.8	

Analysis Batch: 210461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69924-1	TS1-E-2016-2	Total/NA	Water	200.8	210227
720-69924-1 DU	TS1-E-2016-2	Total/NA	Water	200.8	210227
720-69924-1 MS	TS1-E-2016-2	Total/NA	Water	200.8	210227
720-69924-1 MSD	TS1-E-2016-2	Total/NA	Water	200.8	210227
720-69924-2	TS2-E-2016-2	Total/NA	Water	200.8	210227
720-69924-3	FD-2016-2	Total/NA	Water	200.8	210227
720-69924-4	TS3-E-2016-2	Total/NA	Water	200.8	210227
720-69924-5	SW-11-2016-2	Total/NA	Water	200.8	210227
LCS 580-210227/15-A	Lab Control Sample	Total/NA	Water	200.8	210227
LCSD 580-210227/16-A	Lab Control Sample Dup	Total/NA	Water	200.8	210227
MB 580-210227/14-A	Method Blank	Total/NA	Water	200.8	210227

General Chemistry

Analysis Batch: 196100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69924-1	TS1-E-2016-2	Total/NA	Water	9040B	
720-69924-2	TS2-E-2016-2	Total/NA	Water	9040B	
720-69924-3	FD-2016-2	Total/NA	Water	9040B	
720-69924-4	TS3-E-2016-2	Total/NA	Water	9040B	
720-69924-5	SW-11-2016-2	Total/NA	Water	9040B	
LCS 720-196100/1	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 196321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69924-1	TS1-E-2016-2	Total/NA	Water	SM 2540D	
720-69924-2	TS2-E-2016-2	Total/NA	Water	SM 2540D	
720-69924-3	FD-2016-2	Total/NA	Water	SM 2540D	
720-69924-4	TS3-E-2016-2	Total/NA	Water	SM 2540D	
720-69924-5	SW-11-2016-2	Total/NA	Water	SM 2540D	
LCS 720-196321/1	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 720-196321/2	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
MB 720-196321/3	Method Blank	Total/NA	Water	SM 2540D	

TestAmerica Pleasanton

QC Association Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

General Chemistry (Continued)

Prep Batch: 316617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69924-1	TS1-E-2016-2	Total/NA	Water	1664A	
720-69924-1 MS	TS1-E-2016-2	Total/NA	Water	1664A	
720-69924-2	TS2-E-2016-2	Total/NA	Water	1664A	
720-69924-3	FD-2016-2	Total/NA	Water	1664A	
720-69924-4	TS3-E-2016-2	Total/NA	Water	1664A	
720-69924-5	SW-11-2016-2	Total/NA	Water	1664A	
LCS 490-316617/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 490-316617/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 316633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69924-1	TS1-E-2016-2	Total/NA	Water	1664A	316617
720-69924-1 MS	TS1-E-2016-2	Total/NA	Water	1664A	316617
720-69924-2	TS2-E-2016-2	Total/NA	Water	1664A	316617
720-69924-3	FD-2016-2	Total/NA	Water	1664A	316617
720-69924-4	TS3-E-2016-2	Total/NA	Water	1664A	316617
720-69924-5	SW-11-2016-2	Total/NA	Water	1664A	316617
LCS 490-316617/2-A	Lab Control Sample	Total/NA	Water	1664A	316617
MB 490-316617/1-A	Method Blank	Total/NA	Water	1664A	316617

Lab Chronicle

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Client Sample ID: TS1-E-2016-2

Date Collected: 01/22/16 08:20

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69924-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			210227	01/26/16 13:03	DCC	TAL SEA
Total/NA	Analysis	200.8		1	210461	01/27/16 19:38	FCW	TAL SEA
Total/NA	Analysis	1664A		1	316633	02/03/16 10:15	BAD	TAL NSH
Total/NA	Prep	1664A			316617	02/03/16 10:15	BAD	TAL NSH
Total/NA	Analysis	9040B		1	196100	01/22/16 20:26	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	196321	01/26/16 20:51	EYT	TAL PLS

Client Sample ID: TS2-E-2016-2

Date Collected: 01/22/16 09:10

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69924-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			210227	01/26/16 13:03	DCC	TAL SEA
Total/NA	Analysis	200.8		1	210461	01/27/16 20:19	FCW	TAL SEA
Total/NA	Analysis	1664A		1	316633	02/03/16 10:15	BAD	TAL NSH
Total/NA	Prep	1664A			316617	02/03/16 10:15	BAD	TAL NSH
Total/NA	Analysis	9040B		1	196100	01/22/16 20:38	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	196321	01/26/16 20:51	EYT	TAL PLS

Client Sample ID: FD-2016-2

Date Collected: 01/22/16 09:15

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69924-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			210227	01/26/16 13:03	DCC	TAL SEA
Total/NA	Analysis	200.8		1	210461	01/27/16 20:23	FCW	TAL SEA
Total/NA	Analysis	1664A		1	316633	02/03/16 10:15	BAD	TAL NSH
Total/NA	Prep	1664A			316617	02/03/16 10:15	BAD	TAL NSH
Total/NA	Analysis	9040B		1	196100	01/22/16 20:41	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	196321	01/26/16 20:51	EYT	TAL PLS

Client Sample ID: TS3-E-2016-2

Date Collected: 01/22/16 08:30

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69924-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			210227	01/26/16 13:03	DCC	TAL SEA
Total/NA	Analysis	200.8		1	210461	01/27/16 20:28	FCW	TAL SEA
Total/NA	Analysis	1664A		1	316633	02/03/16 10:15	BAD	TAL NSH
Total/NA	Prep	1664A			316617	02/03/16 10:15	BAD	TAL NSH
Total/NA	Analysis	9040B		1	196100	01/22/16 20:44	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	196321	01/26/16 20:51	EYT	TAL PLS

TestAmerica Pleasanton

Lab Chronicle

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Client Sample ID: SW-11-2016-2

Date Collected: 01/22/16 07:44

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69924-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			210227	01/26/16 13:03	DCC	TAL SEA
Total/NA	Analysis	200.8		1	210461	01/27/16 20:33	FCW	TAL SEA
Total/NA	Analysis	1664A		1	316633	02/03/16 10:15	BAD	TAL NSH
Total/NA	Prep	1664A			316617	02/03/16 10:15	BAD	TAL NSH
Total/NA	Analysis	9040B		1	196100	01/22/16 21:10	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	196321	01/26/16 20:51	EYT	TAL PLS

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Pleasanton

Certification Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Laboratory: TestAmerica Pleasanton

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-17
Analysis Method	Prep Method	Matrix	Analyte	

Laboratory: TestAmerica Nashville

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	ISO/IEC 17025		0453.07	02-29-16 *
Alaska (UST)	State Program	10	UST-087	07-24-16
Arizona	State Program	9	AZ0473	05-05-16
Arkansas DEQ	State Program	6	88-0737	04-25-16
California	State Program	9	2938	10-31-16
Connecticut	State Program	1	PH-0220	12-31-17
Florida	NELAP	4	E87358	06-30-16
Georgia	State Program	4	N/A	06-30-16
Illinois	NELAP	5	200010	12-09-16
Iowa	State Program	7	131	04-01-16 *
Kansas	NELAP	7	E-10229	05-31-16
Kentucky (UST)	State Program	4	19	06-30-16
Kentucky (WW)	State Program	4	90038	12-31-16
Louisiana	NELAP	6	30613	06-30-16
Maine	State Program	1	TN00032	11-03-17
Maryland	State Program	3	316	03-31-16 *
Massachusetts	State Program	1	M-TN032	06-30-16
Minnesota	NELAP	5	047-999-345	12-31-16
Mississippi	State Program	4	N/A	06-30-16
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-16
New Hampshire	NELAP	1	2963	10-09-16
New Jersey	NELAP	2	TN965	06-30-16
New York	NELAP	2	11342	03-31-16
North Carolina (WW/SW)	State Program	4	387	12-31-16
North Dakota	State Program	8	R-146	06-30-16
Ohio VAP	State Program	5	CL0033	07-10-17
Oklahoma	State Program	6	9412	08-31-16
Oregon	NELAP	10	TN200001	04-27-16
Pennsylvania	NELAP	3	68-00585	06-30-16
Rhode Island	State Program	1	LAO00268	12-30-15 *
South Carolina	State Program	4	84009 (001)	02-28-16 *
South Carolina (Do Not Use - DW)	State Program	4	84009 (002)	12-16-17
Tennessee	State Program	4	2008	02-23-17
Texas	NELAP	6	T104704077	08-31-16
USDA	Federal		S-48469	10-30-16
Utah	NELAP	8	TN00032	07-31-16
Virginia	NELAP	3	460152	06-14-16
Washington	State Program	10	C789	07-19-16
West Virginia DEP	State Program	3	219	02-28-16 *
Wisconsin	State Program	5	998020430	08-31-16

* Certification renewal pending - certification considered valid.

TestAmerica Pleasanton

Certification Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Laboratory: TestAmerica Nashville (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wyoming (UST)	A2LA	8	453.07	02-29-16 *

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-18
L-A-B	DoD ELAP		L2236	01-19-19
L-A-B	ISO/IEC 17025		L2236	01-19-19
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

* Certification renewal pending - certification considered valid.

TestAmerica Pleasanton

Method Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	TAL SEA
1664A	HEM and SGT-HEM	1664A	TAL NSH
9040B	pH	SW846	TAL PLS
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL PLS

Protocol References:

1664A = EPA-821-98-002

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Weiss Associates
Project/Site: LRTC Stormwater

TestAmerica Job ID: 720-69924-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-69924-1	TS1-E-2016-2	Water	01/22/16 08:20	01/22/16 16:30
720-69924-2	TS2-E-2016-2	Water	01/22/16 09:10	01/22/16 16:30
720-69924-3	FD-2016-2	Water	01/22/16 09:15	01/22/16 16:30
720-69924-4	TS3-E-2016-2	Water	01/22/16 08:30	01/22/16 16:30
720-69924-5	SW-11-2016-2	Water	01/22/16 07:44	01/22/16 16:30

720-69924


166394
303 dr 4/22/16
MA

Chain of Custody Record

TestAmerica
1220 Quarry Lane
Pleasanton, CA 94566
Phone: 925-484-1919 ext 137

Please send analytic results, electronic deliverables and the original chain-of-custody form to:
labresults@weiss.com
ajm@weiss.com
sah@weiss.com

INSTRUCTIONS FOR LAB PERSONNEL:
GeoTracker EDF required? ☐ Yes ☒ No
Equis 4-file EDWEDD required? ☒ Yes ☐ No
Specify analytic/prep method and detection limit in report.
Notify us of any anomalous peaks in GC or other scans.
Call immediately with any questions or problems.

Client Contact		Project Manager: Scott Bourne		Project ID: 426-2026.01 Task 1.1.3		Project ID/path: J:\Lynn Richmond\005_Sampling		COC Number:	
Weiss Associates 2200 Powell Street, Suite 925 Emeryville, CA 94608 (510) 450-6000 (510) 547-5043 Phone FAX		Sampled by: AJM		Sample date(s): 1/22/16		Analysis Turnaround Time:		Page 1 of 1	
Job Name: LRT 2015-2016 Annual Seep Water Sampling		Standard:		Analysis (Method ID)		SPR Number:		Sample Specific Notes:	
Address: Lynn Richmond Terminal 402 Wright Avenue, Richmond, CA 94804		(Specify Days or Hours)		pH (EPA 9040B)		Total Suspended Solids (SM 2540D)		Oil & Grease (EPA 1664A SGT-HEM)	
Lab ID:		Sample Date		Sample Time		Sample Matrix		# of Cont.	
TS1-E-2016-2		1/22/16		0820		W		5	
TS2-E-2016-2				0810				5	
FO-2016-2				0915				5	
TS3-E-2016-2				0830		V		5	
720-69924 Chain of Custody									
									
Preservation Used: 1-Ice, 2-HCl, 3-H ₂ SO ₄ , 4-HNO ₃ , 5-NaOH, 6-Other									
Special Instructions/OC Requirements & Comments: Level II Report. Report with reporting limit and method detection limit. Analyze and report only the metals listed above (Al, Cu, Fe, Ni, Pb, and Zn).									
Relinquished by: [Signature]		Company: WEISS		Date/Time: 1/22/16 1255		Received by: [Signature]		Company: TIA	
Relinquished by: [Signature]		Company: TIA		Date/Time: 1/22/16 1630		Received by: [Signature]		Company: TIA	
Relinquished by:		Company:		Date/Time:		Received by:		Company:	

☒ = Samples released to a secured, locked area.

● = Samples received from a secured, locked area.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Chain of Custody Record



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[illegible]

COOLER RECEIPT FORM

Cooler Received/Opened On 1/26/2016 @ 1000

Time Samples Removed From Cooler 1:27/6@1550 Time Samples Placed In Storage 1600 (2 Hour Window)

1. Tracking # 8264 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 97310166 pH Strip Lot HC554612 Chlorine Strip Lot 072815A

2. Temperature of rep. sample or temp blank when opened: 64 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES NO NA

If yes, how many and where: _____

5. Were the seals intact, signed, and dated correctly? YES...NO NA

6. Were custody papers inside cooler? YES NO NA

I certify that I opened the cooler and answered questions 1-6 (initial) DeV

7. Were custody seals on containers: YES NO and Intact YES...NO NA

Were these signed and dated correctly? YES...NO NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES NO NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES NO NA

12. Did all container labels and tags agree with custody papers? YES NO NA

13a. Were VOA vials received? YES NO NA

b. Was there any observable headspace present in any VOA vial? YES...NO NA

14. Was there a Trip Blank in this cooler? YES...NO NA If multiple coolers, sequence # _____

I certify that I unloaded the cooler and answered questions 7-14 (initial) MDN

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES NO NA

b. Did the bottle labels indicate that the correct preservatives were used YES NO NA

16. Was residual chlorine present? YES...NO NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) MDN

17. Were custody papers properly filled out (ink, signed, etc)? YES NO NA

18. Did you sign the custody papers in the appropriate place? YES NO NA

19. Were correct containers used for the analysis requested? YES NO NA

20. Was sufficient amount of sample sent in each container? YES NO NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) MDN

I certify that I attached a label with the unique LIMS number to each container (initial) MDN

21. Were there Non-Conformance issues at login? YES NO Was a NCM generated? YES NO # _____

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-69924-1

Login Number: 69924

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Arauz, Dennis

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-69924-1

Login Number: 69924

List Number: 3

Creator: McBride, Mike

List Source: TestAmerica Nashville

List Creation: 01/27/16 03:59 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-69924-1

Login Number: 69924

List Number: 2

Creator: Vance, Diane R

List Source: TestAmerica Seattle

List Creation: 01/26/16 12:47 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925)484-1919

TestAmerica Job ID: 720-69925-1

Client Project/Site: LRTC 2014-2015 Annual Stormwater

For:

Weiss Associates

2200 Powell Street

Suite 925

Emeryville, California 94608

Attn: Mr. Scott Bourne



Authorized for release by:

2/5/2016 1:35:08 PM

Micah Smith, Project Manager II

(925)484-1919

micah.smith@testamericainc.com

LINKS

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results through

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual Stormwater

TestAmerica Job ID: 720-69925-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual Stormwater

TestAmerica Job ID: 720-69925-1

Job ID: 720-69925-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative 720-69925-1

Comments

No additional comments.

Receipt

The samples were received on 1/22/2016 4:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.3° C and 2.4° C.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method(s) 1664A: Analysis for Hexane Extractable Material (HEM) was performed for the following samples: TS2-I-2016-2 (720-69925-2) and TS3-I-2016-2 (720-69925-3). Since the HEM result(s) was below the reporting limit (RL), the result(s) for Silica Gel Treated - Hexane Extractable Material (SGT-HEM) was reported as a non-detect. All HEM quality control criteria were met.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual Stormwater

TestAmerica Job ID: 720-69925-1

Client Sample ID: TS1-I-2016-2

Lab Sample ID: 720-69925-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	1.6		0.10	0.10	mg/L	1			200.8	Total/NA
Copper	0.067	B	0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	8.7		0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.018		0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.43		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	1.3		0.0070	0.0019	mg/L	1			200.8	Total/NA
SGT-HEM	2.2	J	3.9	1.4	mg/L	1			1664A	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	7.74		0.100	0.100	SU	1			9040B	Total/NA
Total Suspended Solids	750		10	10	mg/L	1			SM 2540D	Total/NA

Client Sample ID: TS2-I-2016-2

Lab Sample ID: 720-69925-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	0.21		0.10	0.10	mg/L	1			200.8	Total/NA
Copper	0.0099	B	0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	0.90		0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.0017	J	0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.0065		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.078		0.0070	0.0019	mg/L	1			200.8	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	7.71		0.100	0.100	SU	1			9040B	Total/NA
Total Suspended Solids	23		2.0	2.0	mg/L	1			SM 2540D	Total/NA

Client Sample ID: TS3-I-2016-2

Lab Sample ID: 720-69925-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Aluminum	0.24		0.10	0.10	mg/L	1			200.8	Total/NA
Copper	0.0072	B	0.0020	0.00060	mg/L	1			200.8	Total/NA
Iron	0.51		0.040	0.0058	mg/L	1			200.8	Total/NA
Nickel	0.0017	J	0.0030	0.00040	mg/L	1			200.8	Total/NA
Lead	0.0096		0.00040	0.000034	mg/L	1			200.8	Total/NA
Zinc	0.065		0.0070	0.0019	mg/L	1			200.8	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	7.35		0.100	0.100	SU	1			9040B	Total/NA
Total Suspended Solids	4.1		1.0	1.0	mg/L	1			SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual Stormwater

TestAmerica Job ID: 720-69925-1

Client Sample ID: TS1-I-2016-2

Date Collected: 01/22/16 08:12

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69925-1

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1.6		0.10	0.10	mg/L		01/26/16 13:03	01/27/16 20:37	1
Copper	0.067	B	0.0020	0.00060	mg/L		01/26/16 13:03	01/27/16 20:37	1
Iron	8.7		0.040	0.0058	mg/L		01/26/16 13:03	01/27/16 20:37	1
Nickel	0.018		0.0030	0.00040	mg/L		01/26/16 13:03	01/27/16 20:37	1
Lead	0.43		0.00040	0.000034	mg/L		01/26/16 13:03	01/27/16 20:37	1
Zinc	1.3		0.0070	0.0019	mg/L		01/26/16 13:03	01/27/16 20:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	2.2	J	3.9	1.4	mg/L		02/03/16 10:15	02/03/16 10:15	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.74		0.100	0.100	SU			01/22/16 20:51	1
Total Suspended Solids	750		10	10	mg/L			01/27/16 22:04	1

TestAmerica Pleasanton

Client Sample Results

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual Stormwater

TestAmerica Job ID: 720-69925-1

Client Sample ID: TS2-I-2016-2

Date Collected: 01/22/16 07:54

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69925-2

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.21		0.10	0.10	mg/L		01/26/16 13:03	01/27/16 20:42	1
Copper	0.0099	B	0.0020	0.00060	mg/L		01/26/16 13:03	01/27/16 20:42	1
Iron	0.90		0.040	0.0058	mg/L		01/26/16 13:03	01/27/16 20:42	1
Nickel	0.0017	J	0.0030	0.00040	mg/L		01/26/16 13:03	01/27/16 20:42	1
Lead	0.0065		0.00040	0.000034	mg/L		01/26/16 13:03	01/27/16 20:42	1
Zinc	0.078		0.0070	0.0019	mg/L		01/26/16 13:03	01/27/16 20:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	<1.4		3.9	1.4	mg/L		02/03/16 10:15	02/03/16 10:15	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.71		0.100	0.100	SU			01/22/16 20:57	1
Total Suspended Solids	23		2.0	2.0	mg/L			01/27/16 22:04	1

Client Sample Results

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual Stormwater

TestAmerica Job ID: 720-69925-1

Client Sample ID: TS3-I-2016-2

Date Collected: 01/22/16 07:55

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69925-3

Matrix: Water

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	0.24		0.10	0.10	mg/L		01/26/16 13:03	01/27/16 20:46	1
Copper	0.0072	B	0.0020	0.00060	mg/L		01/26/16 13:03	01/27/16 20:46	1
Iron	0.51		0.040	0.0058	mg/L		01/26/16 13:03	01/27/16 20:46	1
Nickel	0.0017	J	0.0030	0.00040	mg/L		01/26/16 13:03	01/27/16 20:46	1
Lead	0.0096		0.00040	0.000034	mg/L		01/26/16 13:03	01/27/16 20:46	1
Zinc	0.065		0.0070	0.0019	mg/L		01/26/16 13:03	01/27/16 20:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	<1.4		3.9	1.4	mg/L		02/03/16 10:15	02/03/16 10:15	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.35		0.100	0.100	SU			01/22/16 20:59	1
Total Suspended Solids	4.1		1.0	1.0	mg/L			01/27/16 22:04	1

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual Stormwater

TestAmerica Job ID: 720-69925-1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 580-210227/14-A

Matrix: Water

Analysis Batch: 210461

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 210227

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	<0.10		0.10	0.10	mg/L		01/26/16 13:03	01/27/16 19:29	1
Copper	0.00127	J	0.0020	0.00060	mg/L		01/26/16 13:03	01/27/16 19:29	1
Iron	<0.0058		0.040	0.0058	mg/L		01/26/16 13:03	01/27/16 19:29	1
Nickel	<0.00040		0.0030	0.00040	mg/L		01/26/16 13:03	01/27/16 19:29	1
Lead	<0.000034		0.00040	0.000034	mg/L		01/26/16 13:03	01/27/16 19:29	1
Zinc	<0.0019		0.0070	0.0019	mg/L		01/26/16 13:03	01/27/16 19:29	1

Lab Sample ID: LCS 580-210227/15-A

Matrix: Water

Analysis Batch: 210461

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 210227

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	1.00	0.923		mg/L		92	85 - 115
Copper	0.100	0.0960		mg/L		96	85 - 115
Iron	10.0	9.69		mg/L		97	85 - 115
Nickel	0.100	0.0948		mg/L		95	85 - 115
Lead	0.100	0.0945		mg/L		95	85 - 115
Zinc	0.100	0.0991		mg/L		99	85 - 115

Lab Sample ID: LCSD 580-210227/16-A

Matrix: Water

Analysis Batch: 210461

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 210227

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	1.00	0.923		mg/L		92	85 - 115	0	20
Copper	0.100	0.0944		mg/L		94	85 - 115	2	20
Iron	10.0	9.56		mg/L		96	85 - 115	1	20
Nickel	0.100	0.0929		mg/L		93	85 - 115	2	20
Lead	0.100	0.0941		mg/L		94	85 - 115	0	20
Zinc	0.100	0.0969		mg/L		97	85 - 115	2	20

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 490-316617/1-A

Matrix: Water

Analysis Batch: 316633

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 316617

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	<1.4		4.0	1.4	mg/L		02/03/16 10:15	02/03/16 10:15	1

Lab Sample ID: LCS 490-316617/2-A

Matrix: Water

Analysis Batch: 316633

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 316617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
SGT-HEM	20.8	17.1		mg/L		82	64 - 132

TestAmerica Pleasanton

QC Sample Results

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual Stormwater

TestAmerica Job ID: 720-69925-1

Method: 9040B - pH

Lab Sample ID: LCS 720-196100/1

Matrix: Water

Analysis Batch: 196100

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	6.900		SU		99	99 - 101

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 720-196406/3

Matrix: Water

Analysis Batch: 196406

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.0		1.0	1.0	mg/L			01/27/16 22:04	1

Lab Sample ID: LCS 720-196406/1

Matrix: Water

Analysis Batch: 196406

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	500	415		mg/L		83	69 - 117

Lab Sample ID: LCSD 720-196406/2

Matrix: Water

Analysis Batch: 196406

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Suspended Solids	500	448		mg/L		90	69 - 117	8	20

Lab Sample ID: 720-69925-1 DU

Matrix: Water

Analysis Batch: 196406

Client Sample ID: TS1-I-2016-2

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	750		740		mg/L		2	10

TestAmerica Pleasanton

QC Association Summary

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual Stormwater

TestAmerica Job ID: 720-69925-1

Metals

Prep Batch: 210227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69925-1	TS1-I-2016-2	Total/NA	Water	200.8	
720-69925-2	TS2-I-2016-2	Total/NA	Water	200.8	
720-69925-3	TS3-I-2016-2	Total/NA	Water	200.8	
LCS 580-210227/15-A	Lab Control Sample	Total/NA	Water	200.8	
LCSD 580-210227/16-A	Lab Control Sample Dup	Total/NA	Water	200.8	
MB 580-210227/14-A	Method Blank	Total/NA	Water	200.8	

Analysis Batch: 210461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69925-1	TS1-I-2016-2	Total/NA	Water	200.8	210227
720-69925-2	TS2-I-2016-2	Total/NA	Water	200.8	210227
720-69925-3	TS3-I-2016-2	Total/NA	Water	200.8	210227
LCS 580-210227/15-A	Lab Control Sample	Total/NA	Water	200.8	210227
LCSD 580-210227/16-A	Lab Control Sample Dup	Total/NA	Water	200.8	210227
MB 580-210227/14-A	Method Blank	Total/NA	Water	200.8	210227

General Chemistry

Analysis Batch: 196100

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69925-1	TS1-I-2016-2	Total/NA	Water	9040B	
720-69925-2	TS2-I-2016-2	Total/NA	Water	9040B	
720-69925-3	TS3-I-2016-2	Total/NA	Water	9040B	
LCS 720-196100/1	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 196406

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69925-1	TS1-I-2016-2	Total/NA	Water	SM 2540D	
720-69925-1 DU	TS1-I-2016-2	Total/NA	Water	SM 2540D	
720-69925-2	TS2-I-2016-2	Total/NA	Water	SM 2540D	
720-69925-3	TS3-I-2016-2	Total/NA	Water	SM 2540D	
LCS 720-196406/1	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 720-196406/2	Lab Control Sample Dup	Total/NA	Water	SM 2540D	
MB 720-196406/3	Method Blank	Total/NA	Water	SM 2540D	

Prep Batch: 316617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69925-1	TS1-I-2016-2	Total/NA	Water	1664A	
720-69925-2	TS2-I-2016-2	Total/NA	Water	1664A	
720-69925-3	TS3-I-2016-2	Total/NA	Water	1664A	
LCS 490-316617/2-A	Lab Control Sample	Total/NA	Water	1664A	
MB 490-316617/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 316633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-69925-1	TS1-I-2016-2	Total/NA	Water	1664A	316617
720-69925-2	TS2-I-2016-2	Total/NA	Water	1664A	316617
720-69925-3	TS3-I-2016-2	Total/NA	Water	1664A	316617
LCS 490-316617/2-A	Lab Control Sample	Total/NA	Water	1664A	316617
MB 490-316617/1-A	Method Blank	Total/NA	Water	1664A	316617

TestAmerica Pleasanton

Lab Chronicle

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual Stormwater

TestAmerica Job ID: 720-69925-1

Client Sample ID: TS1-I-2016-2

Date Collected: 01/22/16 08:12

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69925-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			210227	01/26/16 13:03	DCC	TAL SEA
Total/NA	Analysis	200.8		1	210461	01/27/16 20:37	FCW	TAL SEA
Total/NA	Analysis	1664A		1	316633	02/03/16 10:15	BAD	TAL NSH
Total/NA	Prep	1664A			316617	02/03/16 10:15	BAD	TAL NSH
Total/NA	Analysis	9040B		1	196100	01/22/16 20:51	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	196406	01/27/16 22:04	EYT	TAL PLS

Client Sample ID: TS2-I-2016-2

Date Collected: 01/22/16 07:54

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69925-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			210227	01/26/16 13:03	DCC	TAL SEA
Total/NA	Analysis	200.8		1	210461	01/27/16 20:42	FCW	TAL SEA
Total/NA	Analysis	1664A		1	316633	02/03/16 10:15	BAD	TAL NSH
Total/NA	Prep	1664A			316617	02/03/16 10:15	BAD	TAL NSH
Total/NA	Analysis	9040B		1	196100	01/22/16 20:57	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	196406	01/27/16 22:04	EYT	TAL PLS

Client Sample ID: TS3-I-2016-2

Date Collected: 01/22/16 07:55

Date Received: 01/22/16 16:30

Lab Sample ID: 720-69925-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.8			210227	01/26/16 13:03	DCC	TAL SEA
Total/NA	Analysis	200.8		1	210461	01/27/16 20:46	FCW	TAL SEA
Total/NA	Analysis	1664A		1	316633	02/03/16 10:15	BAD	TAL NSH
Total/NA	Prep	1664A			316617	02/03/16 10:15	BAD	TAL NSH
Total/NA	Analysis	9040B		1	196100	01/22/16 20:59	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	196406	01/27/16 22:04	EYT	TAL PLS

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Pleasanton

Certification Summary

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual Stormwater

TestAmerica Job ID: 720-69925-1

Laboratory: TestAmerica Pleasanton

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-17
Analysis Method	Prep Method	Matrix	Analyte	

Laboratory: TestAmerica Nashville

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	ISO/IEC 17025		0453.07	02-29-16 *
Alaska (UST)	State Program	10	UST-087	07-24-16
Arizona	State Program	9	AZ0473	05-05-16
Arkansas DEQ	State Program	6	88-0737	04-25-16
California	State Program	9	2938	10-31-16
Connecticut	State Program	1	PH-0220	12-31-17
Florida	NELAP	4	E87358	06-30-16
Georgia	State Program	4	N/A	06-30-16
Illinois	NELAP	5	200010	12-09-16
Iowa	State Program	7	131	04-01-16 *
Kansas	NELAP	7	E-10229	05-31-16
Kentucky (UST)	State Program	4	19	06-30-16
Kentucky (WW)	State Program	4	90038	12-31-16
Louisiana	NELAP	6	30613	06-30-16
Maine	State Program	1	TN00032	11-03-17
Maryland	State Program	3	316	03-31-16 *
Massachusetts	State Program	1	M-TN032	06-30-16
Minnesota	NELAP	5	047-999-345	12-31-16
Mississippi	State Program	4	N/A	06-30-16
Montana (UST)	State Program	8	NA	02-24-20
Nevada	State Program	9	TN00032	07-31-16
New Hampshire	NELAP	1	2963	10-09-16
New Jersey	NELAP	2	TN965	06-30-16
New York	NELAP	2	11342	03-31-16
North Carolina (WW/SW)	State Program	4	387	12-31-16
North Dakota	State Program	8	R-146	06-30-16
Ohio VAP	State Program	5	CL0033	07-10-17
Oklahoma	State Program	6	9412	08-31-16
Oregon	NELAP	10	TN200001	04-27-16
Pennsylvania	NELAP	3	68-00585	06-30-16
Rhode Island	State Program	1	LAO00268	12-30-15 *
South Carolina	State Program	4	84009 (001)	02-28-16 *
South Carolina (Do Not Use - DW)	State Program	4	84009 (002)	12-16-17
Tennessee	State Program	4	2008	02-23-17
Texas	NELAP	6	T104704077	08-31-16
USDA	Federal		S-48469	10-30-16
Utah	NELAP	8	TN00032	07-31-16
Virginia	NELAP	3	460152	06-14-16
Washington	State Program	10	C789	07-19-16
West Virginia DEP	State Program	3	219	02-28-16 *
Wisconsin	State Program	5	998020430	08-31-16

* Certification renewal pending - certification considered valid.

TestAmerica Pleasanton

Certification Summary

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual Stormwater

TestAmerica Job ID: 720-69925-1

Laboratory: TestAmerica Nashville (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wyoming (UST)	A2LA	8	453.07	02-29-16 *

Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-18
L-A-B	DoD ELAP		L2236	01-19-19
L-A-B	ISO/IEC 17025		L2236	01-19-19
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

* Certification renewal pending - certification considered valid.

TestAmerica Pleasanton

Method Summary

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual Stormwater

TestAmerica Job ID: 720-69925-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	TAL SEA
1664A	HEM and SGT-HEM	1664A	TAL NSH
9040B	pH	SW846	TAL PLS
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL PLS

Protocol References:

1664A = EPA-821-98-002

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Weiss Associates
Project/Site: LRTC 2014-2015 Annual Stormwater

TestAmerica Job ID: 720-69925-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-69925-1	TS1-I-2016-2	Water	01/22/16 08:12	01/22/16 16:30
720-69925-2	TS2-I-2016-2	Water	01/22/16 07:54	01/22/16 16:30
720-69925-3	TS3-I-2016-2	Water	01/22/16 07:55	01/22/16 16:30

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Chain of Custody Record

1. The first step is to identify the problem or question that needs to be addressed. This involves understanding the context and the specific requirements of the task.

2. Next, it is important to gather relevant information and data. This can be done through research, consultation with experts, or by analyzing existing resources.

3. Once the information is gathered, the next step is to develop a plan or strategy. This involves breaking down the problem into smaller, manageable parts and determining the best approach to solve each part.

4. After the plan is developed, it is time to implement the solution. This involves putting the plan into action and monitoring progress to ensure that the solution is effective.

5. Finally, it is important to evaluate the results of the solution. This involves comparing the actual outcomes with the expected results and identifying any areas for improvement.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

THE LEADER IN ENVIRONMENTAL TESTING

2/5/2016

COOLER RECEIPT FORM

Cooler Received/Opened On 1/26/2016 @ 1000

Time Samples Removed From Cooler 12:40 Time Samples Placed In Storage 12:52 (2 Hour Window)

1. Tracking # 8275 (last 4 digits, FedEx) Courier: FedEx

IR Gun ID 97310166 pH Strip Lot HC554612 Chlorine Strip Lot 072815A

2. Temperature of rep. sample or temp blank when opened: 0.8 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES YES NO NA

If yes, how many and where: 1 IL

5. Were the seals intact, signed, and dated correctly? YES YES NO NA

6. Were custody papers inside cooler? YES YES NO NA

I certify that I opened the cooler and answered questions 1-6 (initial) ll

7. Were custody seals on containers: YES NO and Intact YES NO NO NA

Were these signed and dated correctly? YES NO NO NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES YES NO NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES YES NO NA

12. Did all container labels and tags agree with custody papers? YES YES NO NA

13a. Were VOA vials received? YES NO NO NA

b. Was there any observable headspace present in any VOA vial? YES NO NO NA

14. Was there a Trip Blank in this cooler? YES NO NO NA If multiple coolers, sequence # NA

I certify that I unloaded the cooler and answered questions 7-14 (initial) ⊕

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES NO NO NA

b. Did the bottle labels indicate that the correct preservatives were used YES YES NO NA

16. Was residual chlorine present? YES NO NO NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) ⊕

17. Were custody papers properly filled out (ink, signed, etc)? YES YES NO NA

18. Did you sign the custody papers in the appropriate place? YES YES NO NA

19. Were correct containers used for the analysis requested? YES YES NO NA

20. Was sufficient amount of sample sent in each container? YES YES NO NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) ⊕

I certify that I attached a label with the unique LIMS number to each container (initial) ⊕

21. Were there Non-Conformance issues at login? YES NO Was a NCM generated? YES NO # NA

TestAmerica

~~2/5/2016~~

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-69925-1

Login Number: 69925

List Number: 1

Creator: Arauz, Dennis

List Source: TestAmerica Pleasanton

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-69925-1

Login Number: 69925

List Number: 2

Creator: Ford, Easton

List Source: TestAmerica Nashville

List Creation: 01/26/16 12:50 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-69925-1

Login Number: 69925

List Number: 3

Creator: Vance, Diane R

List Source: TestAmerica Seattle

List Creation: 01/26/16 12:48 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX C

Upland Capping System Inspection Form

Former United Heckathorn Superfund Site Upland Capping System Inspection Form
Levin Richmond Terminal, 402 Wright Avenue, Richmond, California

I. General Information

Site: Former United Heckathorn Superfund Site, Levin Richmond Terminal
Inspector: Mary Cunningham, PE and Scott Bourne, PE
Address: 402 Wright Avenue, Richmond, CA
Organization: CDIM Engineering, Inc.
Date and time of inspection: 5/31/16, 10 AM

II. Upland Area Concrete Cap, Gravel Cover, and Drainage System Observations

Note significant cracks, holes, penetrations, damage, settlement, or any exposure of underlying soil in any component of the capping system.

North Main Terminal (SW-3)

Yes No N/A Comments

Are concrete cap surfaces in adequate condition to promote effectiveness of the cap?

☒ ☐ ☐

Are gravel cover surfaces in adequate condition to promote effectiveness of the cap?

☐ ☐ ☒

Is storm water drainage infrastructure (interceptors, drain inlets) in adequate condition to prevent exposure of underlying soil to runoff?

☒ ☐ ☐

Is accumulated sediment observed in the interceptors or drain inlets?
If yes, note location and photograph.

☐ ☒ ☐

Interceptors not opened during this inspection. Drain inlets have inlet protection.

Are corrective actions required?

☐ ☒ ☐

Attach a photograph of areas requiring corrective action.

☐ ☐ ☒

Describe any recent repairs/maintenance:

Concrete was added along dock to widen road and provide increased storm water capture. The concrete extends from bents 1-10 and bents 11-20.

Describe conditions and locations of the capping system which require attention:

Sinking/degraded pavement was observed in a small area to the south of the cap. While this is outside of the Heckathorn cap, LRTC plans to remove the affected section and repour 12 inches of concrete.

Describe corrective actions required and their date(s) of implementation:

NA

Signature:



Date: 5/31/16

1 of 5

Former United Heckathorn Superfund Site Upland Capping System Inspection Form
Levin Richmond Terminal, 402 Wright Avenue, Richmond, California

North Main Terminal/United Heckathorn (SW-4)

Yes No N/A Comments

Are concrete cap surfaces in adequate condition to promote effectiveness of the cap?

☒ ☐ ☐

Are gravel cover surfaces in adequate condition to promote effectiveness of the cap?

☒ ☐ ☐

Is storm water drainage infrastructure (interceptors, drain inlets) in adequate condition to prevent exposure of underlying soil to runoff?

☒ ☐ ☐

Is accumulated sediment observed in the interceptors or drain inlets?
If yes, note location and photograph.

☐ ☒ ☐

Interceptors not opened during this inspection. Drain inlets have inlet protection.

Are corrective actions required?

☐ ☒ ☐

Attach a photograph of areas requiring corrective action.

☐ ☐ ☒

Describe any recent repairs/maintenance:

See SW-3 area for discussion of concrete addition along dock. The concrete work in SW-4 area is ongoing.

Describe conditions and locations of the capping system which require attention:

There is a long seam and surficial cracking in the roadway north of the stockpile storage area. This should continue to be monitored.

Describe corrective actions required and their date(s) of implementation:

NA

Signature:



Date: 5/31/16

2 of 5

Former United Heckathorn Superfund Site Upland Capping System Inspection Form
Levin Richmond Terminal, 402 Wright Avenue, Richmond, California

North Main Terminal/United Heckathorn (SW-5)

Yes No N/A Comments

Are concrete cap surfaces in adequate condition to promote effectiveness of the cap?

☒ ☐ ☐

Are gravel cover surfaces in adequate condition to promote effectiveness of the cap?

☒ ☐ ☐

Is storm water drainage infrastructure (interceptors, drain inlets) in adequate condition to prevent exposure of underlying soil to runoff?

☒ ☐ ☐

Is accumulated sediment observed in the interceptors or drain inlets?
If yes, note location and photograph.

☐ ☒ ☐

Interceptors not opened during this inspection. Drain inlets have inlet protection.

Are corrective actions required?

☐ ☒ ☐

Attach a photograph of areas requiring corrective action.

☐ ☐ ☒

Describe any recent repairs/maintenance:

A new roadway is being installed in SW-5/SW-6 areas. The road crosses rail tracks and will increased the paved portion of the site.

Describe conditions and locations of the capping system which require attention:

Gravel cover to continue being monitored; gravel should be added on an as-needed basis.

Describe corrective actions required and their date(s) of implementation:

NA

Signature:



Date: 5/31/16

3 of 5

Former United Heckathorn Superfund Site Upland Capping System Inspection Form
Levin Richmond Terminal, 402 Wright Avenue, Richmond, California

North Main Terminal/United Heckathorn (SW-6)

Yes No N/A Comments

Are concrete cap surfaces in adequate condition to promote effectiveness of the cap?

☒ ☐ ☐

Are gravel cover surfaces in adequate condition to promote effectiveness of the cap?

☒ ☐ ☐

Is storm water drainage infrastructure (interceptors, drain inlets) in adequate condition to prevent exposure of underlying soil to runoff?

☒ ☐ ☐

Is accumulated sediment observed in the interceptors or drain inlets?
If yes, note location and photograph.

☐ ☒ ☐

Interceptors not opened during this inspection. Drain inlets have inlet protection.

Are corrective actions required?

☐ ☒ ☐

Attach a photograph of areas requiring corrective action.

☐ ☐ ☒

Describe any recent repairs/maintenance:

NA

Describe conditions and locations of the capping system which require attention:

Gravel cover to continue being monitored; gravel should be added on an as-needed basis.

Pavement adjacent to the gate in SW-7 should continue to be monitored for further degradation.

Describe corrective actions required and their date(s) of implementation:

NA

Signature:



Date: 5/31/16

4 of 5

Former United Heckathorn Superfund Site Upland Capping System Inspection Form
Levin Richmond Terminal, 402 Wright Avenue, Richmond, California

North Main Terminal/United Heckathorn (SW-7)

	Yes	No	N/A	Comments
Are concrete cap surfaces in adequate condition to promote effectiveness of the cap?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are gravel cover surfaces in adequate condition to promote effectiveness of the cap?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is storm water drainage infrastructure (interceptors, drain inlets) in adequate condition to prevent exposure of underlying soil to runoff?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is accumulated sediment observed in the interceptors or drain inlets? If yes, note location and photograph.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<i>Interceptors not opened during this inspection. Drain inlets have inlet protection.</i>
Are corrective actions required?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Attach a photograph of areas requiring corrective action.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Describe any recent repairs/maintenance: NA				
Describe conditions and locations of the capping system which require attention: NA				
Describe corrective actions required and their date(s) of implementation: NA				

Signature:



Date: 5/31/16

5 of 5